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Address.

MEMORIAL ADDRESS ON THE LIFE AND CHARACTER OF LAWSON TAIT.*

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Death makes no conquest of this conqueror
For now he lives in fame, though not in life.
—*Shakspeare.*

It is eminently proper that a part of the proceedings of this meeting should be devoted to the memory of a deceased Honorary Fellow—Lawson Tait, who died at Llandudno, Wales, June 13, 1899.

This distinguished surgeon, the son of Archibald Campbell Tait, was born at Edinburgh, Scotland, May 1, 1845. His father was a guild brother of Heriot's Hospital, into which institution the son was admitted as a foundation scholar, at the early age of 7 years. In this humble institution he early showed those traits of mind which enabled him to win a scholarship in the University of Edinburgh, and which characterized his subsequent brilliant career. We are informed that he did not graduate at this latter institution, although he studied in the departments of both the arts and medicine. Those who were students with him in this great institution remember him as a lad of great aptitude, but with comparatively little continuity of application. He was fond of those diversions which appeal with such force to vigorous young manhood. As a consequence he found the prescribed tasks very irksome and the imposed discipline very annoying. He is reported as having been more intimately acquainted with the Proctor than with any other officer of the institution. But his expanding and virile mind could be no less active than his vigorous body. The themes which engaged his attention, however, were those which occurred out of the ordinary routine. The great work of the Darwins was then creating a storm-center in the scientific, to say nothing of the religious, world; and Huxley and Spencer were commanding alike the anathemas of the ecclesiastics and the plaudits of reactionary thinkers. It was to the latter class that young Tait belonged, and continued to belong during his whole life. His devotion to the new philosophy brought him into antagonism with the orthodox thought that then dominated, as it yet dominates, this great seat of learning. It was in these controversies that he developed and displayed much of that polemic tendency and forensic power which in subsequent years proved at once his strength and his weakness. But the nature of the subject that constituted the basis of these early controversies was such as to direct his attention to the more rational methods of study and investigation. Following the lead of Darwin he early learned to study things rather than words. There never was a time when he was not more attracted by an object itself than by the most artistic description of it. He early acquired the habit of translating words into ultimate conceptions—a habit which in subsequent years made him a severe and formidable critic, for loose thinkers and careless writers.

It was precisely this preliminary training that fitted young Tait for the most successful prosecution of his medical studies. His pupilage in the medical school was in the essentially didactic era of medical teaching. Learned lectures prepared entirely with reference to doctrine and diction were the dominant features of instruction. The laboratories with their heartless iconoclasm, scarcely yet had a footing. Personal authority was not yet dethroned. The dictum of the professor was yet accepted over and above demonstrated facts of contrary significance. Against this order of things young Tait, with great love for truth, but with no profound reverence for men, naturally found himself in revolt. In the medical school he was attracted and influenced by men who were already breaking away from the thraldom of tradition. Over and above the others of the class was the illustrious Sir James Y. Simpson, to whom the subject of our sketch sustained the relation of a special pupil and later that of assistant. He was also profoundly influenced by the teachings and the example of Syme, whose habits of cleanliness in his surgical work and whose results were in happy contrast with the methods and results of others connected with the Royal Infirmary. He was also an assistant to Sir Henry Littlejohn and took special instruction from Mackenzie Edwards. During this time he gave particular attention to the various biologic studies, and particularly to investigations by the microscope, an instrument, which, in the early sixties, did not occupy the prominence in scientific work that it does to-day. This early habit had a pronounced influence on his subsequent professional career, which really began at the early age of 22.

After taking his L.R.C.P. and his L.R.C.S., he left Edinburgh, in 1867, to accept the position of house surgeon to Wakefield Hospital. It was here that he did his first ovariotomy, July 29, 1868, in the earlier months of his twenty-fourth year. He did five other ovariotomies between that and 1870, when he removed to Birmingham. Although he had done six ovariotomies by the time he was 25, the fact does not seem to have turned his head in the direction of special work, for when he came to Birmingham he located in one of the suburbs and devoted himself to general practice. The year of his advent into the great midland metropolis was spent largely in preparing for and passing his English examinations. This year he took his M.R.C.S. Eng., and his F.R.C.S. Eng., and completed his Fellowship in the Royal College of Surgeons at Edinburgh.

At this time the young Scotch surgeon was very poor. It required but little persuasion to induce him to asso-

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ciate himself in office with Dr. Bell Fletcher, an established practitioner. He took this important step in 1871, and in doing so announced himself as a consulting surgeon. This in a young man of 26 required much courage, particularly in conservative England. Courage, however, was a quality in which Tait was never wanting. His self-assertion commanded recognition. The community began to estimate him as he estimated himself. He joined in a movement to establish a hospital for women—a movement which, in spite of the strong opposition of the conservative element, was crowned with success and Mr. Tait was elected to the honorary staff, a position which he retained during the succeeding twenty-two years; after which he was made consulting surgeon, a distinction which he held at the time of his death. His identification with this movement was the real commencement of a career as illustrious as any in the annals of surgery. The succeeding year (1872) he performed two operations of historic importance. February 2, he removed an ovary for suppurative disease, and on August 1 he extirpated the uterine appendages to arrest the growth of a bleeding myoma. This simple statement sounds commonplace enough to-day, when the first of the procedures is exemplified daily in almost every operating-room in the world, and when the other, after a considerable vogue, has been supplanted largely by other and more satisfactory methods. It should be remembered, however, that in that day neither operation had been done, and that their performance was looked on by the time-servers as the unwarranted exploit of surgical audacity. Criticism began to flow in from every side. The chorus of fault-finding was augmented by those who sought to stifle his evolutional teachings at the Midland Institute, at which he was lecturing on physiology and biology. But he never failed to give a Roland for an Oliver—often, be it said, when the Oliver was not worth it. To Mr. Tait, however, criticism was but a wholesome stimulus and antagonism but an incentive to further endeavor. Fired by a realizing sense of the importance of his new achievements, and spurred on by the animadversions of his adversaries, he wrote his famous and epoch-making thesis on "Diseases of the Ovaries," for which the British Medical Association voted him the Hastings Gold Medal for 1873. It was during this year that he did his first hysterectomy for myoma of the uterus, following, with but slight modification, the technic of Koeberlé. The next year—1874—he was instrumental in organizing the Birmingham Medical Institute, of which he became an original member. His activities of this sort, however, were not limited to the medical profession. He was interested in everything about him, but especially in art, the drama and politics. Despite his now rapidly developing work, despite the controversies to which it gave rise, and despite the antagonisms arising from his Darwinianism, which he continued to expound at the Institute, he sought further antagonisms by entering the political arena, although in a minor way. He was elected to the Town Council in 1876. While he was busy with all of these interests he was engaged also on work of a more enduring character. One was his now classic little work on "Hospital Mortality," which appeared early the next year. It was really his final and crushing manifesto in the long argument he had been conducting with the conservatives. No work of equal size ever produced a more profound impression on the profession of England. It was followed the same year by his little book on "Diseases of Women." This small volume came to your speaker when he was practicing his profession in an isolated village in a Western state. He had been taught to apply caustics, to replace the uterus, to adjust pessaries, and to do divers and sundry other things which, in the aggregate made up the gynecology of that period. He had faithfully followed the teachings of the day—and had become convinced of their futility. The first ray of light came to him in the little book from Birmingham—and the darkness began to dissipate. Never was a book studied with more zeal—a zeal which a few years later led him across the Atlantic to Birmingham to see somewhat of the new surgery at the hand of him who had fashioned it. But it is to him rather than to myself that I must devote my discourse. Never was a surgeon or a citizen in his early thirties busier than was Mr. Tait at this particular period. The year that he published his "Hospital Mortality" and his "Diseases of Women" witnessed his adoption of the practice of removing the uterine appendages for incurable diseases of the Fallopian tubes. He removed a hematosalpinx June 21, and made the profession familiar with its pathology. It was also about this time that the storm of antagonism against his Darwinianism broke out with renewed vigor, and ecclesiasticism exhausted itself in vituperation.

The next year—1878—witnessed his completion of a series of fifty ovariotomies, with nineteen deaths. This left him 13 per cent. for which to apologize; as the accepted inevitable mortality, as exemplified in the work of Sir Spencer Wells, was 25 per cent. But he was reasonably safe from criticism, for he had operated under the carbolic spray and in accordance with the canons of the then new Listerian gospel of surgery. Mr. Tait himself, however, was far from satisfied with either his results or the conditions under which he had secured them. He then and there expressed his doubts as to the efficiency of those procedures which in the aggregate were called "Listerism," but he at the same time seized on the central truth of the new surgery and proclaimed his belief in "scrupulous attention to cleanliness of every kind and in all directions." This was distinctly the beginning of "aseptic" as distinguished from "antiseptic" surgery; and I believe this audience will bear me out in the declaration that while each has its place, the former rather than the latter is to-day the accepted method of procedure. At any rate, Mr. Tait, as was his wont, shaped his practice according to his convictions. He modified his technic in the direction of simplicity. One accessory after another was laid aside until a knife, scissors, needles and thread, a few hemostatic forceps, some sponges and tap water were the essential constituents of his armamentarium. I shall never forget the contempt with which he alluded to the great parade of instruments in the operating-room of a distinguished Parisian surgeon, stating that it suggested an intention "to fight over again the battle of Waterloo."

It was with this simplified technic that he proceeded with his great work. It was during this year that he first opened the abdomen for the treatment of pelvic abscess. The next year—1879—fairly bristled with new achievements. He did his first cholecystotomy, and his explanation and defense of the operation marked the beginning of the rational surgery of the gall tract. This same year he removed the first pyosalpinx and the first hydrosalpinx in his practice, and again called attention to pathologic conditions that had been described a half century before by more than one writer. So strong had become the opposition to him by this time that it was quite

fashionable, especially in London, to openly discredit everything that he said or did. A most distinguished metropolitan operator at this time openly expressed his doubts, not only as to the fact of Mr. Tait's newly-heralded operation, but also as to the very existence of the disease for which it was alleged to have been done. Mr. Tait, however, answered the criticism by exhibiting his specimens—and went on with his work. Within this busy twelve-month he described his flap-splitting operation for repair of the perineum, introduced his method for the reposition of the inverted uterus, developed his plan for the dilatation of the cervix by continuous elastic pressure—and not satisfied with this, he organized the Birmingham Natural History Society, publishing a valuable paper on the minute structure of the pitcher plants! He was also interesting himself in archeology, and published at different times articles on "Orientation of Churches," "Prehistoric Fortifications," "Monumental Brasses," and "Britain During the Stone Age."

The next decade opened on this resourceful man in the very maximum of vigor. His first work in the eighties was to introduce and establish the operation of hepatotomy—his cases rapidly multiplying until he was able to publish a series of ten, nine for hydatids and one for abscess. This report opened the eyes of the surgical world, but not more so than did another that he published during this year. This was his second series of fifty ovariotomies with only three deaths as against nineteen in his previous fifty. A drop in his own mortality from 38 to 6 per cent., a point 19 per cent. lower than that of Sir Spencer Wells, was an evidence of achievement that required no wordy proclamation. What was more, these results had been obtained by Taitonian rather than Listerian methods—by "aseptic" rather than "antiseptic" formula. This was the first strong manifesto of Mr. Tait against Listerism, and was the real beginning of an antagonism that he waged until his death.

The next two years—1881-2—were not so fruitful in intellectual results as the dozen which had preceded. It was in 1881 that Mr. Tait permitted an opportunity to pass unimproved, whereby a patient lost her life and science was for a time deprived of a helpful impetus. He was called by Mr. Hall-Wright and urged to operate for a case of ruptured tubal pregnancy. He hesitated and the patient died. The autopsy showed the feasibility of the operation. I shall ever remember the description of his chagrin as Mr. Tait told me of this incident several years later. It was not until Jan. 17, 1883, that he encountered his next case of this character. It may be safely surmised that there was no hesitancy this time. He operated and saved his patient. A series of thirty-five cases of operation for ruptured tubal pregnancy with but two deaths speedily followed, and its publication put this surgical resource on a sound footing. While all this and other work was in progress, this indefatigable man found time to expand his Hasting's Prize Essay into a treatise on "Diseases of the Ovaries," and to see it through the press.

In 1884 Mr. Tait, prompted by a catholicity of spirit which protested against what he termed the exclusiveness of an existing London organization of which he was a member, joined a number of his friends in the organization of the British Gynecological Society, of which he was elected vice-president. During this same year he published his first recorded 1000 cases of abdominal section. This was followed the next year by the publication of his startling record of 139 consecutive ovariotomies without a death. This remarkable record was also offered as a protest against Listerism. It was assailed, as a matter of course, and the question became one of veracity. But the cases were of record and, when I visited him a few months later, I had the satisfaction of examining the bedside notes, all duly signed by those present at the operation and by the nurses who kept them. With all the protesting, not an allegation in that record stands disproven. It was in 1884 also that Mr. Tait visited America at the invitation of one of our Fellows, Dr. Vander Veer, and demonstrated his operations in the hospitals of New York, Albany and other cities.

One would suppose that so much of professional work would exhaust all of at least one man's energy, but such was not the case with this remarkable man. About this time he withdrew from the Town Council and contested, unsuccessfully, the Bordesley division as a radical home-rule candidate for Parliament. He was also a writer of leaders for the principal newspaper of his party in Birmingham in which enterprise he also had a pecuniary interest. He was also a shareholder in a theater, and gave some personal attention to its conduct. In 1886 he was the president of the British Gynecological Society and went regularly to London to preside over its monthly meetings. With all of this activity he seemed to crave still further responsibilities. In 1888 he delivered the Ingleby lecture, choosing "Ectopic Pregnancy" as his topic. The same year he accepted the professorship of gynecology in Queen's College. One of the earliest fruits of his professorial labors was the collection of his previous writings and their publication the following year in the first volume of a projected two-volume work on "Diseases of Women and Abdominal Surgery"—the second volume of which never appeared. This same year—1889—he was elected president of the Birmingham Medical Institute, an office which he held during the next four years. But it is impossible in the brief space of an address, such as this, to trace, step by step, the great work accomplished by this man. To the brief résumé which I have already given I must add that he was elected to the presidency of Mason College, and that he was awarded the Cullen and Liston Memorial Prize by the Edinburgh College of Physicians for his services to medical science. From America, also, he received honorable recognition. The University of the State of New York conferred on him, *honoris causa*, the title of Doctor of Medicine, as did the St. Louis College of Physicans and Surgeons, and he was an Honorary Fellow of both the American Gynecological Society and of the American Association of Obstetricians and Gynecologists.

The last five years of Mr. Tait's life were marked with a more or less continuous invalidism. He was operated on in London for stone, and subsequently developed a chronic nephritis. These and other depressing influences prompted him largely to relinquish his operative work, and he sought repose at beautiful Llandudno, facing the Conway estuary and commanding a view of the Penmaenmawr Mountains. So impressed was he with the sanitive features of this location that, but a short time before his death, he purchased an inn on a high point of land with the object of converting it into a sanatorium for consumptives. But he was never permitted to carry this philanthropic plan to fruition, as he was suddenly seized, June 3, with renal complications from which he succumbed, June 13, 1899. In accordance with his request his remains were cremated at Liverpool. In further compliance with his wishes his

ashes were deposited in a cave on his private grounds.

It is difficult to summarize a life of such originality and activity. It may be said of Mr. Tait, however, that he laid the foundation of modern abdominal and pelvic surgery; that he personally devised the chief operations that pertain to that department of practice; that he invented many new instruments and improved many others; that he refined surgical technic to its present simplicity; that he demonstrated for the first time much of the now accepted pathology of the uterine appendages; that he reduced the mortality in abdominal and pelvic surgery to the minimum; that he, more than any other one man, forced the reforms whereby modern hospitals have been brought to their present high state of efficiency, and finally, that he has added many years of life and happiness not only to women, but to mankind. Living *primus inter pares* his death leaves the largest possible vacancy in the productive intellectuality of the surgical world. But the influences he set in motion are happily immutable, and illustrate, in the words of Longfellow, that

> —when a great man dies,
> For years beyond our ken,
> The light he leaves behind him lies
> Upon the paths of men.

My own personal acquaintance with this great man began in the winter of 1886. In the midsummer of that year I had published a short series of abdominal sections which I had done as nearly as I knew how in accordance with his teachngs. The report, although published in a local American journal[1], attracted his attention, just as did every other report of the kind published at that time in any part of the world. It was said of him at this time that he saw every sparrow that fell from the gynecologic heavens. He at once sent an appreciative letter to the journal and another to myself, inviting me to visit him. His letter found me in the final acts of departure for the voyage. The promptness with which I responded to his invitation must have been a trifle startling. On my way to New York, however, I was told that "Tait had said that he didn't want to be bothered with any more American tramps." This rankled not a little, and the more so the nearer I got to England. When I reached Queenstown I sent a message to a personal friend in Birmingham asking him to inquire into the correctness of the report, and to advise me at Liverpool, for I had made up my mind to never cross the threshold of one who had spoken thus opprobriously of my compatriots. I was advised to come on, that "it was all right," and my reception was indeed most cordial. This man, who was startling the professional world, and the magnetism of whose genius had lured me across the Atlantic, was indeed a striking personality. Of rather less than medium stature, broad-shouldered and deep-chested, he carried, in splendid poise, a head to describe which one can think of no other word than leonine. His full growth of very dark hair was in striking contrast to the prevailing fashion, while his closely cropped side whiskers gave him a distinctly English expression. His eyes, scintillating with intelligence, were now penetrating one with their attentiveness, dancing merrily at some pleasantry, flashing defiance at the narration of some wrong, and, anon, expressing tenderest sympathy over some picture of human suffering. His well-chiseled mouth was another of his most expressive features, and by its mobility could be seen the play of emotion that engaged his mind and heart. It was a royal feast attended only by Mr. Tait, his charming and faithful wife, United States Consul Hughes, and myself. There was a cordiality in the atmosphere that made one feel at home. All the genial sympathy was enhanced by the captivating frankness with which the host discussed the personal aspects of his great struggle. "No," said he, "far from disliking the Americans I am really fond of them. I owe them a debt of gratitude that I can not easily repay, for if it had not been for the recognition and support they gave me, and are yet giving me, I could not have succeeded in my fight against English conservatism." He repeatedly made this declaration to me, and he reiterated it in a letter which I received from him but a few years ago, and in which he delineated the rise and development of "The Birmingham School." I mention this only to show Mr. Tait's real sentiments toward America and Americans. While I do this, I do not wish to conceal the fact that he had grievances against certain of our countrymen, and that he realized it. This grievance was against those who, while spending months at other hospitals, would run up to Birmingham for a day, "just to see Tait operate." The material at Birmingham was always so abundant that they were generally gratified. They saw a simplicity that was strikingly in contrast with the complex procedures they had seen elsewhere, and they saw a celerity of operation that in contrast with the usual slowness of uncertain workers looked much like recklessness. They tarried only to satisfy their curiosity, and went away without knowing the man or understanding his methods or familiarizing themselves with his results. These people generally constituted themselves his public critics, and printed animadversions that were generally colored by the London prejudice to which they had willingly subjected themselves. If Mr. Tait did not call these people "tramps" he ought to have done so, for no word in the language so aptly defined their leading characteristic.

The weeks that followed my initial interview were replete with valuable experience, delightful personal association and cordial hospitality, so that when my leave-taking came I felt I was leaving the home 'neath whose roof I had imbibed the inspiration for my life-work.

The surgeon who thus imbued me with admiration and confidence was the most dexterous and resourceful whom it has ever been my privilege to observe. He did nothing with the appearance of haste, but moving by direct lines and to a definite purpose, every crook of his finger counted. No complication seemed to dismay him, and no emergency disturbed his equanimity. His dexterity was phenomenal, and his celerity a marvel, even in a country that abounds in operators of pre-eminent ability. I have seen him begin and complete an ovariotomy inside of five minutes, and conclude a hysterectomy within twelve minutes after making the initial incision. While this was true, I have seen him spend an hour over an open abdomen, when the complications and the welfare of his patient demanded it.

The man who thus impressed me was indeed a remarkable personality, and one difficult to delineate. His manners were of the vacillating kind. At one time he would be brusk and inconsiderate, forgetting his mood the next minute in an exhibition of deferential courtesy that was captivating. If it can not be said of him that he always observed the Emersonian dictum "that manners are made up of petty sacrifices," he often demonstrated how politeness could embrace generous benefactions. As a host he was captivating in his hospitality. Himself fond of the pleasures of the table, he encouraged his guests to similar indulgences. As a story-teller he had but few equals, and his *repertoire* was full of the

[1] Columbus Med. Jour., July, 1886.

latest novelties, many of them of his own invention. I never heard him tell a story malapropos. He was a veritable flash-light in repartee and, to cling to my metaphor, often blinding in his merciless brilliancy. As a public speaker he was clear and incisive, never pausing for a word, a habit affected by the average parliamentary speaker, but always selected the right one for the right place. He was magnetic, and his discourses were more frequently interrupted by applause than were those of many successful speakers. So accurate were his extemporaneous utterances that they could have been safely published without revision. He always spoke to a purpose, and was never "a tuner of accents." As a writer he was especially able on controversial themes. While his language in his descriptive works was always correct, and his diction elegant, he lacked completeness, system and arrangement. These defects made it difficult to utilize many of his writings as working formulæ, although everything that he wrote contained a germ truth that sprouted and grew to rich fruition in the fertile soil of the profession.

It is impossible for me to portray the inner character of him, the incidents and surface indications of whose life I have briefly summarized. There is that in the life of men that defies scrutiny and eludes the pen. Who shall weigh courage, or measure tenderness, or estimate love? Never were elements better combined to defy the cunning of analysis. It were easy and natural in speaking of Mr. Tait to use such words as able, energetic, aggressive, inventive, resourceful, brave and tender, but it is not easy to portray the psychic play whereby these and other qualities were blended in varying degree to produce the character that he revealed under varying circumstances. We can only follow the advice of Locke, who said that "the actions of men are the best interpreters of their thoughts." To interpret one's thoughts is to interpret one's character. If we are to interpret Mr. Tait's character by his actions, we are at once impressed that he was a man of great character, for he was a man of great action. With him activity seemed to be as essential as breathing is to his existence. It was with him veritably a question of do or die. He acted openly before the world, and invited the closest scrutiny. He realized that, fundamentally, all action relating to the common good is, and of right ought to be, public. He was always ready for the task at hand, and thus went naturally from one achievement to another. Thus opportunities which at first seemed remote became present activities. Sophocles said: "Heaven never helps the man who will not act." The activities of Mr. Tait certainly entitled him to large benefactions from Heaven. One of the earliest of these benefactions came to him in the guise of adversity. He felt its pangs, but with his propensities it was, indeed, the severe mistress that forced him to high endeavor. It freed him to believe that what man had done man could do, and to realize that he was a man. He set himself to high things—and he speedily justified his presumption. Adversity rarely travels except under the escort of enmity. To no man have enemies been of more value than to Mr. Tait. Rather than to have been without them he might well have purchased them with pure gold. They aroused him to activity, and developed the best that was in him. He answered them openly, frankly, often severely. While he was always frank in acknowledging their merits, he never offended good taste by treating them to "a diet of praises sauc'd with lies." Carlyle justly observed that "no man is born without ambitious worldly desires," and Mr. Tait had his full share of ambition. He was indeed an exemplification of the fact that "ambition has no rest." He was anxious to place his name on the scroll; he was proud of his achievements, and he was interested that the record should be written with truth and justice. He seemed daily to illustrate the declaration of Scott that

> One crowded hour of glorious life
> Is worth an age without a name.

He was distinctly the man for the time. At his advent professional opinion, like a dear old lady who had feasted well, was drowsing in an arm-chair. He heralded new things in thunder tones, poked the drowsy jade in the ribs and broke up the siesta. Of course, there were angry protests, but they availed nothing, for he went on thundering and prodding until everybody was awakened. This was his life. In its busy course he often paused to smooth the troubled brow, to feed the hungry, and to give to poverty wherewith to cover its nakedness. He loved trees and flowers, and heard music alike in rustling leaves and gurgling brooks. His heart of tenderness won him to the side of defenseless brutes, and he became their champion in the ceaseless conflict between sentiment and reason. Withal, he had wisdom, for oft he knew that he did not know, and, not knowing, sought to know. No adversary ever criticized him half so severely as he criticized himself. Often impulsive, he was yet given to deliberation, and in such deep thought is wisdom born. His wisdom, however, manifested itself in firmness of mind rather than in mastery of appetite. Indeed, he, like many of the most illustrious in history, may have had occasion to exclaim with his own beloved Burns, that "Nature formed me

> 'With passions wild and strong,
> And list'ning to their witching voice
> Has often led me wrong.'"

If this were true it was because he lived intensely, and, living thus, he lived, not long, but much. While he lived, he lived in deeds, thoughts, feelings and heart-throbs, taking little account of years or clock-dials. In the intensity of his life he erected a monument of majestic good, which alone appeals to memory, and beneath which mote and blemish have sought their own oblivion.

I prefer to remember Mr. Tait as I last saw him. It was four years ago, during the session of the British Medical Association in London. One morning, at his suggestion, we slipped away from the meeting and, joining my family, we spent the day on the Thames. We were overjoyed to have him thus to ourselves. Although he was showing some signs of a recent illness—possibly some traces of the deep malady that finally carried him off—he was strikingly interesting in his comments on the old land-marks that throng either bank of that historic river. History, anecdote, criticism and comment flowed from him in a sparkling stream, while at times he joined in the merriment of the children with the zest of youth itself. We returned to London late at night. I escorted him to the National Liberal Club, where he was living. He insisted that I tarry with him a while, and conducted me to a little corner balcony overlooking the great reading-room. "Stand there with uncovered head," said he. "It's as hallowed a place as there is in all England!" It was the vantage point from which the immortal Gladstone was wont to address his faithful followers. He then conducted me up to the tower, from which the great panorama of London lights was visible. It was an impressive sight. As London typifies the world, so did this revelation of it seem to inspire him with world-wide

themes. He was away from the hospital, away from the chamber of sickness, from the hall of controversy, and, thus unchained, his great mind revelled in its freedom. England, the Indies, Africa, Anglo-American relations, the then recent war between China and Japan, the contrasting features of Occidental and Oriental civilizations, the great ethnic movements of the world, music the drama, human happiness, and life itself were themes that he touched with the spark of illumination. As we talked, "Big Ben" in Parliament Tower hard by tolled twelve, anon one, and still anon two. The moon rose, and the silhouette of the great city was seen against the tinted sky of the East. The speaker of great thoughts paused to view the majestic scene. I receded a step or two, that I might contemplate, in clearer perspective, the more impressive picture of triumphant genius with the sleeping world at his feet! Thus may he abide in peaceful memory!

Original Articles.

TREATMENT OF THE ABDOMINAL VISCERA THROUGH THE COLON.*

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The colon is closely related anatomically to the abdominal viscera, enclosing within its embrace the mesenteric vessels, which play an important rôle in the regulation of the circulation and general metabolism of the body. The hepatic, splenic, and sigmoid flexures and the transverse colon are in intimate relation with the liver, duodenum, kidneys and pelvic organs, therefore, it is evident that it is possible to influence these viscera more or less by the application of heat, cold, electricity and other physical stimuli through the colon. Close as the anatomic relationship is between the colon and the abdominal viscera, described above, the physiologic relations may be said to be still more intimate. This is evident from the serious disturbances that accompany diseases of the colon, and is clearly shown by general physiologic action resulting from certain therapeutic measures applied directly to the colon.

In discussing such treatment of the abdominal viscera by means of the colon, we may consider: 1, the direct effect of these therapeutic measures in removing pathologic conditions of the colon; 2, the effect of contiguity with other viscera, and 3, the reflexes.

The most common treatment of the colon is to secure evacuation of retained contents, usually by some mechanical means, such as the introduction of water into the lower bowel, which often has the effect of distending the rectum and sigmoid. This acts as an irritant, causing contraction, resulting in expulsion of the contents. Salts, glycerin, soaps and other substances are often introduced in concentrated solutions for the purpose of producing such contractions and consequent evacuation. These methods are often very valuable for meeting indications for immediate relief, but in the treatment of many chronic diseases they are not only inadequate, but may do more harm than good.

The entire colon is the seat of many diseased conditions, both of the mucous membrane, and of the muscle walls. It is essential that a diagnosis of the location and extent of the pathologic conditions be determined before an attempt is made to apply therapeutic measures. This becomes especially imperative when by means of more improved methods in the technic we are able to apply remedial measures directly to the mucous membrane and to the muscle walls—treatment which will be found unusually effective and valuable, owing probably to the favorable arrangement of the nervous mechanism, and the reflexes of the colon. For example, the effect of high temperature, when applied directly to the mucous membrane of the colon by the introduction of water at relatively high temperatures, is immediate and very marked in securing reflex stimulation of the vasomotor centers. The blood-pressure is thereby raised, the kidneys are stimulated, the hepatic function is increased, and leucocytosis is induced. The effects thus produced seem indeed to result in a general accelerated metabolism, oxidation and elimination; in short, the result is a general cell activity. It is, however, not the purpose of the present paper to go into details on these points, but merely to briefly present the technic of the method of treatment, and to present some data obtained in the course of the investigations—data which seem to the author clinically and scientifically interesting. The methods of treatment through the colon to which the writer would briefly call attention, are: 1, hydrotherapy; 2, hot and cold air treatment; 3, mechanical or massage treatment; 4, electricity; 5, medication per colon; 6, dietetics. In the treatment of the colon, the position of the patient is an important consideration. While some prefer to place the patient in a lateral position, the writer finds that by elevating the hips to a considerable height, the dorsal position has many advantages, and has, therefore, constructed a table adapted to his purpose. (Fig. 1.) By means of this table the patient can be raised to any angle and the water at a temperature of 50 C. (122 F.) is introduced, 250 to 300 c.c. at a time. This is repeated three or four times with water at 50 C., each quantity being allowed to run off into a conveniently placed receptacle before introducing any more. The water is then raised to 52 C. (125.6 F.) and finally to 55 C. (131 F.), using in all about three to six liters of water. The water is introduced through a soft-rubber tube with end and side openings. The patient is then allowed to go to the toilet-room, after which he is again placed on the table, and now receives a similar short treatment with water cooled down to 2 or 5 C. (35.6 or 41 F.) by means of ice.

I have extensively studied the effect of such treatment on dogs, and have used it on patients, with very favorable results. Without going into any detailed account of these experiments, the following typical ones may be mentioned:

EXPERIMENT 1.—The abdomen was opened under local anesthesia and partial general anesthesia, and the viscera exposed to cold draughts of air until the abdominal viscera became quite bluish with a fall of blood-pressure, and near approach of collapse. Water at 50 C. (122 F.) was then introduced into the colon, and kept there for some time. No marked changes could be observed in the appearance of the abdominal viscera, even after five minutes of continuous irrigation. The vessels were still markedly congested, and the rise in the blood-pressure was very slight. After withdrawal of the water, the animal was allowed to pass into a state of shock. The viscera were of a very bluish shade, the vessels tortuous and congested. Water at 55 C. (131 F.) was then introduced into the colon and kept there for one minute, the water withdrawn and the procedure repeated. A marked change was observed in the visceral circulation, the color gradually became of a pinkish hue, the blood-pressure rose rapidly, and within ten minutes the animal was apparently out of shock. The dog recovered.

EXPERIMENT 2.—In this experiment the viscera of a second dog was similarly exposed to cold air after opening the abdomen. Water at 55 C. (131 F.) was introduced and imme-

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diately produced a very marked effect on the circulation, as in the experiment with No. 1. At the end of fifteen minutes, the heart-beat, which had become very weak before introducing the water, was again slow and strong, and the body temperature, which had previously fallen to 97 F. was again at 100 F. At the end of thirty minutes the temperature was 103 F., pulse and respiration rapid, surface red, blood-pressure lowered. Ice water at 3 degrees was next introduced. The temperature fell rapidly to 100 F., the pulse and respiration became slow and regular, the heart strong and vigorous, with a rise of blood-pressure. The colon was then opened for examination, and no hemorrrhage was observed—no damage to its mucous membrane; in fact, it appeared perfectly normal. The colon has been frequently examined after repeated lavage at 55 C.; no damage could be observed.

These and other experiments I have made show: 1, that marked congestion of the abdominal viscera is not promptly reduced until the temperature of the introduced water has reached a temperature of 55 C. (131 F.); 2, that the blood-pressure is raised, and the heart slowed at first, but after prolonged irrigation with hot water, the blood-pressure is lowered, and there is a marked rise in the body temperature; 3, that by subsequent use of ice water the heart-beat, respiration, blood-pressure, and the body temperature are again restored to normal conditions; 4, that water at 55 C. (131 F.) for the time mentioned above does not damage the mucous membrane of the colon as far as could be observed.

A series of observations has also been made on patients under similar treatment. The following points have been particularly noted: 1. The effect on heart and circulation. 2. Changes produced in the blood. *a*. The number of red corpuscles before and after each treatment. *b*. The leucocytes. *c*. Comparisons regarding these points before and after a similar daily treatment, continued daily for two to three weeks. 3. The effect on the temperature: mouth, skin and stomach. 4. The effect on the gastro-intestinal tract. 5. The effect on the kidneys. 6. The effect on the liver. 7. The effect on the general metabolism. 8. The pelvic organs. 9. The effect on elimination and auto-intoxication.

Effect on the heart and circulation.—The heart is not materially affected at first by water in the colon at the temperature of 50 C. (122 F.), but in the course of from five to ten minutes the heart-beats become faster and the pulse weaker, owing to the dilatation of the arterioles. When the temperature of the water has reached 55 C. (131 F.) there is an immediate reflex stimulation on the heart and the vasomotor centers. The beats become slower and the pulse shows a firm briskness which is verified by an increased blood-pressure, as shown by sphygmograph and sphygmometer. Some patients experience a sensation of chilliness at the beginning of the treatment, but this soon disappears. If the treatment be continued for thirty minutes the blood-pressure may again fall, owing to a dilatation of the cutaneous vessels, produced by the heated blood as it reaches the periphery. The time when this occurs depends largely on the individual conditions of the heart and circulation, and is in all cases immediately changed on introduction of cold water into the colon. With the cutaneous circulation well established, the equilibrium of the circulation remains constant for a longer or shorter time, this depending on the condition

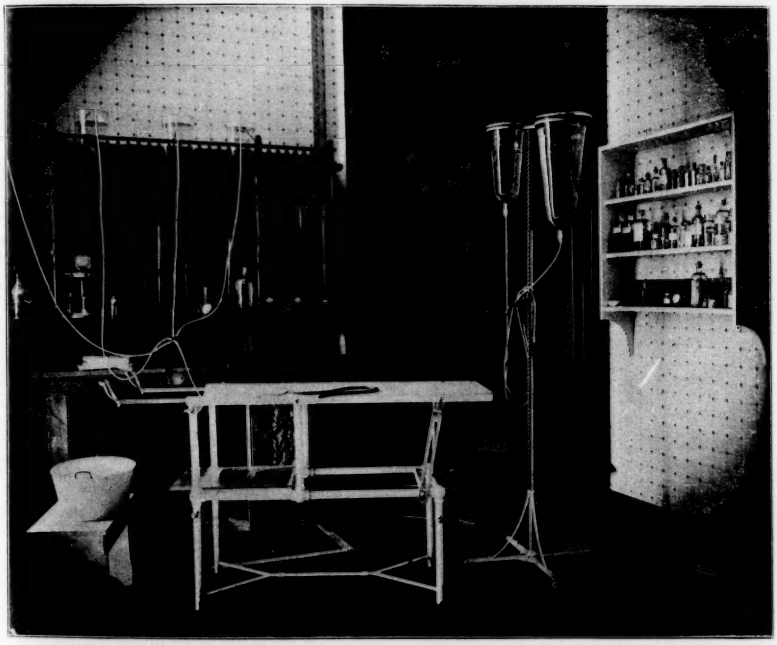

FIGURE 1.

of the heart, the character of the blood-vessels, and the nervous mechanism of the individual. Facts of diagnostic value may often be obtained in the progress of this treatment, by carefully observing the heart and circulation before, during and after the treatment.

Changes Produced in the Blood.—The effect of the treatment and the composition of the blood is indicated by the following table showing the number of red and white corpuscles, with the percent. of hemoglobin, before and after each treatment.

Case.	Number Corpuscles. Red. Before.	Red. After.	Red. Total gain.	Red. Per ct. gain.	White. Before.	White. After.	White. Total gain.	White. Per ct. gain.	Hemoglobin. Before.	Hemoglobin. After.
J. S.	5,860,000	5,902,000	42,000	0.2	9,000	11,655	1,995	20.	70	73
C. H. D.	4,890,000	4,910,000	20,000	0.3	6,038	5,890	Loss. 148	Loss. 2.	45	52
R. E. H.	5,670,000	6,960,000	1,290,000	22.	6,195	7,245	1,050	17.	67	75
J. L. C.	4,850,000	5,230,000	380,000	8.	9,345	9,450	Loss. 105.	Loss. 1.	70	73
M. P. F.	4,660,000	4,840,000	180,000	4.	5,586	6,636	1,050	17.	65	72
M. S. W.	4,620,000	5,300,000	670,000	14.	6,370	9,450	3,080	48	70	78
E. J. W.	5,840,000	6,872,000	12,000	6.	5,812	10,756	4,944	89	70	80
F. G.			250,000	Loss. 5			Loss. 965	Loss. 10.		
J. T.	6,890,000	6,650,000	240,000	Loss. 7.	9,305	8,400	735	10.	70	75
Temp. 50 C	6,540,000	6,070,000	470,000		7,035	7,770			70	65

The observations as represented in the following table show that water of 48 to 50 C. (112.6 to 122 F.) produced no increased leucocytosis, but sometimes the reverse, while water at 55 C. (131 F.) has considerable effect in increasing the number of white corpuscles.

INCREASED LEUCOCYTOSIS after colonic lavage, 8 to 10 hours after a meal. Temperature, 55 C. (131 F.). Time, 25 minutes. Followed by ice water at 5 C. (41 F.), 2 to 5 minutes.

Case.	Before.	After.	Gain.	Per cent. gain.
1	5,740	6,692	952	17
2	7,800	10,625	2,825	36
3	4,420	6,722	2,302	52
4	4,964	7,561	2,597	34
5	11,760	14,760	3,060	26
6	9,660	11,655	1,995	20
7	6,428	9,349	2,921	45
8	6,627	7,722	1,095	16
9	7,726	10,772	3,056	39
10	3,924	5,749	1,825	46

INCREASED LEUCOCYTOSIS after colonic lavage, 2 to 3 hours after a meal. Temperature, 55 C. (131 F.). Time, 25 minutes. Followed by colonic lavage with ice water at 5 C. (41 F.), 2 to 5 minutes duration.

Case.	Before lavage.	After lavage.	Total gain.	Per cent. gain.
11	5,250	6,353	1,103	21
12	6,370	9,450	3,080	49
13	3,742	4,940	2,198	59
14	6,480	7,890	1,410	23
15	9,760	11,368	1,608	17
16	8,242	9,292	1,050	13
17	10,420	12,656	2,236	21
18	6,720	7,942	1,222	19
19	7,842	8,976	1,134	14
20	5,742	7,894	2,154	39

ESTIMATION of the number of Leucocytes after colonic lavage. Temperature of the water, 50. C (122 F.). Followed by cold water, temperature 5 C. (41 F.) Time, 25 minutes.

Case.	Before lavage.	After lavage.	Gain.	Loss.	Per cent.
21	7,717	6,672	. . . .	945	12
22	6,393	6,090	. . . .	390	6
23	9,345	8,400	. . . .	945	10
24	5,670	6,190	520	. . . .	10
25	11,478	10,773	. . . .	705	7
26	9,341	9,450	109	. . . .	1
27	6,038	5,888	. . . .	150	2
28	3,479	3,686	207	. . . .	6
29	7,335	7,350	15	. . . .	0.2
30	9,292	8,242	. . . .	1,050	11

One reason may be offered as an explanation for these phenomena. The occasional decrease produced by water at 48 to 50 C. is probably due simply to rapid dilatation of the vessels, with lowered blood-pressure, and consequently a less number of leucocytes are swept into the general circulation. The increase in the blood pressure produced by water at 55 C., as it does on the splanchnic area, may sweep out the blood from this region into the general circulation.

Alimentary leucocytosis is undoubtedly produced in this way, viz., through vasomotor stimulation of the splanchnic area, but the greater increased leucocytosis resulting from colonic lavage at 55 C. is due to the greater stimulation produced by the high temperature acting on the splanchnic area.

Comparison of the composition of the blood before and after two to three weeks' treatment has shown that while a general circulation improved with increase of total number of corpuscles, there is found no permanent increase of the proportion of the leucocytes over the reds. We may regard the increase in number of leucocytes as physiologic.

Effect on the Body Temperature, Mouth, Skin and Stomach.—In a number of cases of gastro-intestinal diseases where the condition of circulation gave evidence of congestion of the splanchnic area with contraction of the peripheral arterials, it is interesting to note that the skin temperature was below the normal while the internal temperature as found in the stomach was above normal. The temperature in the stomach was taken with a small thermometer especially made for me by Mr. Hicks of London. After colonic lavage at 50 C. (131 F.) for five minutes, there was an immediate fall in internal temperature with a corresponding rise of the skin temperature. On continuing the colonic lavage there was a gradual rise of the internal temperature as determined in the stomach, and a continuation of the rise of the skin temperature. At the end of thirty minutes the general elevation of temperature was found as usual with the equalization of the relative temperature as determined in the stomach, mouth, and skin. On the introduction of ice water the temperatures were equally reduced to normal limits. The following table is taken as the average from a number of cases showing temperatures found in the stomach, mouth and in the skin.

AVERAGE TEMPERATURES (Fahrenheit) of the mouth, stomach and skin before and after colonic lavage at 55 C. in cases of splanchnic congestion.

Time.	Mouth.	Stomach.	Skin.
Before lavage	98.1°	101.4°	93.8°
Five minutes after lavage	98.1°	101.2°	93.7°
Twenty minutes after lavage	99.6°	100.7°	96.2°
Thirty minutes after lavage	101.0°	101.6°	98.0°
After lavage with (ice) water at 50 C. for five minutes	98.4°	99.2°	95.0°

Effect on the Gastro-Intestinal Tract.—The immediate effect of high temperatures in the colon is to pro-

duce a series of contractions. These contractions at first appear to be local, but in the progress of the treatment the peristalsis of the entire colon followed by both peri- and antiperistaltic movements of the small intestines are observed to take place, and these movements are extended until those of the stomach are also materially increased. These contractions of colon, intestines and stomach are not produced by water having a temperature of only 48 C. (118.4F.), but they begin at once when water at 55 C. (131 F.) is introduced into the colon.

The following experiments on dogs will serve to show the effect of water on the movements of the gastro-intestinal tract.

Dog 1, the movements extending from the stomach throughout the whole tract. The contractile movements in this dog were in very strong contrast with the slow and occeasional movements in Dogs 2 and 3. There was little or no difference to be observed in the intestinal movements of the latter two dogs, one of which had received colonic flushing at 50 C. (122 F.) and the other no flushing at all.

Similar introduction of water at 55 C. (131 F.) in the treatment of patients at once provokes peristaltic pains which, according to the testimony of female patients, are of the same nature as labor pains. These pains are very much lessened, however, by first using water at 50 C. (122 F.) and then increasing its temperature to 55 C. (131 F.) A somewhat extended treatment of this kind produces a very decided general peristalsis,

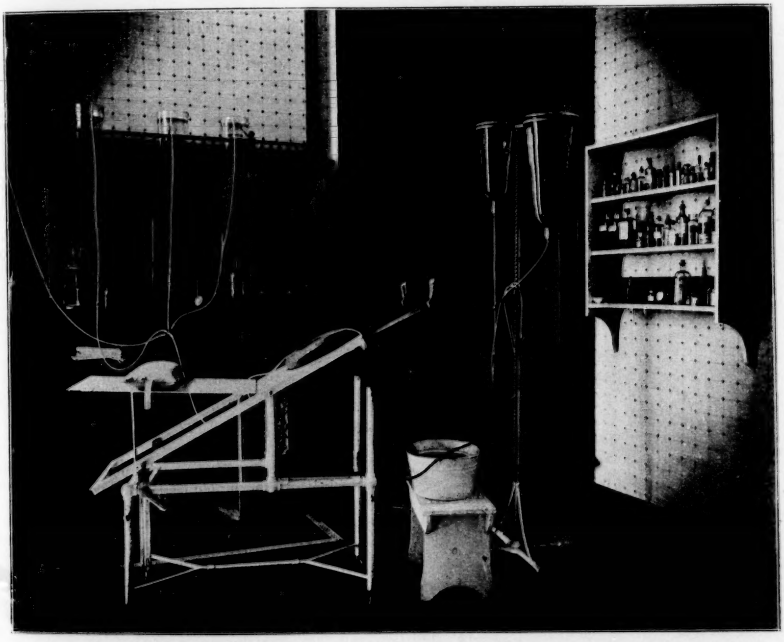

FIGURE 2.

EXPERIMENTS ON THE GASTRO-INTESTINAL TRACT.

EXPERIMENT 1.—The abdomen of the dog was opened and the viscera exposed. Water at 48 C. (118.4 F.) in the colon failed to produce any visible movements either of the colon or of the intestines. Water at 50 C. (122 F.) also failed to produce any increase in the natural movements of the intestines. Water at 55 C. (131 F.), on the other hand, immediately produced local contractions, followed by slight antiperistaltic and peristaltic movements. As this water was withdrawn and fresh quantities having the same temperature were introduced, the peristaltic movements continued to increase, and after a lapse of twenty-five minutes the movements had reached the stomach, and the wave continued, causing a marked and vigorous retraction, followed by extension of the pyloric portion of the stomach. These observations were verified by the following experiments:

EXPERIMENT 2.—Three dogs were experimented on simultaneously. Dog 1 was subjected to colonic lavage with water at 55 C. for twenty minutes. Dog 2 was similarly treated, while Dog 3 received no lavage. The abdomens of all these dogs were then opened at the same time, by myself and my assistants. The peristaltic movements were very marked in

as is evidenced by the passing of gas and fecal matter from high up in the intestines. No distress accompanies this treatment, and the patients, in fact, usually express a feeling of general comfort. The treatment, further, also exerts a marked influence on the motor power of the stomach, as I have proved by a large number of observations in cases of gastric motor insufficiency due to simple atony.

In considering the causes that produce such remarkable increase of the motility of the gastro-intestinal tract when the colon is treated with hot water (55 C.), it would seem fairly probable that: 1. The stimulation of the end nerves in the colon by water at 55 C. (131 F.) produces a reflex action on the nervous mechanism of the entire tract. 2. The heated colon may act like a hot water bag, by direct contiguity with the abdominal viscera. 3. The heated blood of the splanchnic area may in turn stimulate the muscle cells. 4.

The vasomotor effect in replacing venous by arterial blood in the muscle walls would stimulate the muscle tone and produce contractions, and the periodic introduction and withdrawal of the water act as a gymnastic exercise. It may be that all of these factors are more or less active in producing the general result.

Effect on the Kidneys.—The hot-water treatment has a decided effect on the kidneys. The secretion of the normal kidneys varies with the degree of the circulation, or the amount of blood that flows through the organ. Landergren and Tigerstedt have shown that when the kidney is in active functional condition, unusually large quantities of blood pass through it. The nerve-supply of the kidney, its vasoconstrictions and vasodilatations, are largely influenced by reflex action, and the secreting activity of the kidney seems to further depend on the changes in the blood-supply. The secretion of urea by the epithelial cells of the kidney has gained additional significance through Berkeley's recent discovery of nerve-fibers passing through the basement membrane and ending between the epithelial cells.

In the course of my experiments it was found that water at 40 to 45 C. (104 to 113 F.) produced no immediate secretion in the kidney, and that this was produced within three minutes by water at 55 C. (131 F.) The water of the lower temperatures was further found to remain in the colon for a very much longer time than the water of higher temperature. A moderate quantity of the latter would be completely absorbed in about fifteen minutes, while from an hour to an hour and a half would be required for the complete absorption of an equal quantity of water at 40 to 45 C. (104 to 113 F.)

The following table of urine secretion and urea elimination by the kidney indicates most clearly how the functional activity of this organ is stimulated by hot water lavage of the colon.

ESTIMATION of the amount of urine and urea before and after colonic lavage. Temperature, 55 C. (131 F.). Urine collected for 24 hours. Diet and work the same before and after treatment.

Principal symptoms or disease.	Before treatment.			After treatment.		
	Amount urine, 24 hrs.	Per cent. urea.	Total urea. Grams.	Amount urine, 24 hrs.	Per cent. urea.	Total urea. Grams.
Acute renal hyperemia	300	3.	9.	1,200	1.5	18.
"Catarrhal jaundice." Icterus	1 050	1.	10.5	1,550	1.9	29.45
Chronic gastritis, dilatation, renal hyperemia	650	1.8	11.70	1,500	1.2	18.
Hepatic cirrhosis, hypergastritis, interstitial chron	750	2.	15.	1,025	2.5	25.62
Gastritis chron	1,240	1.1	13.64	1,440	2.1	30.24
Chronic diarrhea	675	2.4	16 20	1,020	2.9	29.58
Gastric myasthenia, splanchnic congestion	1,140	1.8	20.52	1,325	2.7	35 27
Gastric dilatation	1,009	1.	10.09	1,125	1 85	20.81
Gastritis glandularis chronica, splanchnic congestion	1,150	1.9	21.85	1,400	2.5	35.
"Atrophic" cirrhosis liver	790	1.6	12.64	950	2.1	19.95

The causes for this interesting phenomenon may be the following: 1. Reflex stimulation of the kidney cells and of the vasomotor mechanism of the gland. 2. Increase in the general blood-supply. 3. Heat stimulation by the heated blood and directly by contact with the heated colon. 4. Increased destructive metabolism would produce increased quantities of urea and alloxur bodies, and these would act as diuretics and produce an increased activity on the part of the kidney. 5. Absorption of water alone would increase the volume of the blood and of the blood-pressure.

Effect on the Liver.—The liver is also largely influenced by colonic lavage. This has in fact already been shown by the investigations of a number of earlier investigators. Bidder, Schmidt, Zolesky and Rosenberg have shown that the flow of bile in dogs is increased by the introduction of water into the intestines. Krull and Lowenthal have shown, clinically, in cases of catarrhal jaundice, that irrigation of the colon with cold water produces an increase in the flow of the bile. Noel Poton has, however, further shown that this apparent increase is due to an increase of the water and not of the solids of the bile. Barbera further shows that the excretion of bile runs parallel with the excretion of urea, and as urea is chiefly formed in the liver, other conditions being equal, it forms an index, or at least a partial index, of the bile excreted. The above table of urea determinations can therefore be taken to indicate the effect of hot water on the bile secretion of the liver.

It will be noted that for some time after treatment with colonic lavage, the per cent. of urea remained quite high. Rosenberg and Barbera's work shows that the effect of food on the liver is due to the vascular changes produced, and Heidenhain and Rohring have shown that an increase in the flow of blood also increases the flow of bile.

The general conclusion among physiologists is that the bile-producing function of the liver is not under the direct control of the nervous system, as is the case with other glands, but that it is influenced chiefly by the flow of blood. These facts are of great importance in the treatment by methods that influence the circulation, especially that of the splanchnic and more particularly the portal circulation.

Lavage of the colon with water at 55 C. (131 F.) not only increases the flow of blood, but further stimulates the cells of the gland by raising the temperature of the blood as well as by direct contact with the heated colon.

Effect on General Metabolism.—Metabolism, strictly speaking, is simply the changes occurring within the body, between food material and the tissues and organs of the body, and these changes are, as far as we yet know, subject to the laws governing physics and chemistry. That the metabolism may be effected by physical means, such as motion, is perfectly clear. The changed or hastened process of metabolism involves corresponding chemical changes, as, for example, in the oxidation of food or of tissue material, and the setting free of an equivalent quantity of heat. The heated blood may act on tisssue cells, may stimulate the nervous mechanism and give rise to increased cellular activity in tissues and organs throughout the whole body.

Metabolism, destructive and constructive (katabolism, anabolism), is further effected by the character of the food material, as it is brought into the blood, by the supply of water and of oxygen, by changes of temperature, and, finally, by nervous impulses of various kinds. These metabolic changes, whether destructive or constructive, may be produced by impulses set up in the same nerve; the one process may be gradually replaced by the other, or both may go on at the same time.

To summarize—Hot water in the colon (at 55 C.) influences metabolism: 1. By increasing the circulation, thus furnishing more food, more oxygen to the tissues, and more rapidly removing a variety of waste products. 2. Through nervous impulses by the heat stimulation. 3. By directly increasing the temperature of the blood. 4. By direct heat stimulation of the cells of organs contiguous to the colon. Increased metabolism is shown by increased elimination, especially of urea, by an increased amount of food taken, and often by an increase in the weight of the patient.

Effect on the Pelvic Organs.—The beneficial effect of colonic lavage on the pelvic organs, both male and female, is considerable. In all forms of pelvic congestions of the uterus and ovary the symptoms rapidly disappear by the use of colonic lavage, using water at 55 C. (131 F.). Water at such a temperature is, as has already been pointed out, perfectly safe, and is well borne in the colon, although it is not safe to use such a temperature directly in the more delicate and sensitive vagina.

Auto-Intoxication and Elimination.—In considering, finally, the effect of colonic lavage on such general processes as elimination, auto-intoxication, oxidation, etc., especially on that of the various forms of toxemia or general auto-intoxication, I must confine myself to a number of observations made directly on patients.

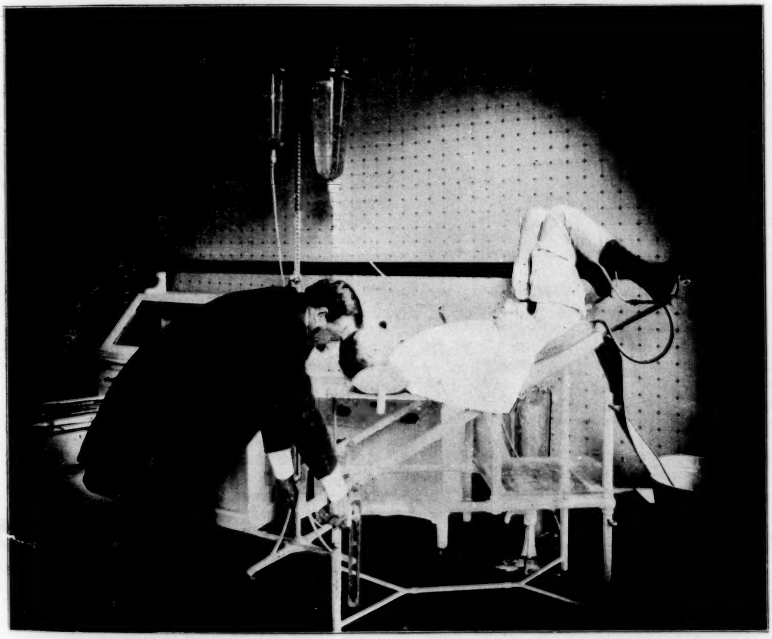

FIGURE 3.

Auto-intoxication can evidently originate in a number of different organs through functional failure, such as the gastro-intestinal tract, the liver, the kidneys, the skin and the lungs.

1. Auto-intoxication arising from the gastro-intestinal tract is probably far more common than is generally supposed. Cases of acute gastro-enteritis are relatively rare, while cases of chronic gastro-intestinal atony are quite common, resulting in various symptoms of auto-intoxication.

2. The manifold function of the liver makes it a fairly common starting-point for toxemia, either directly, by producing toxic substances, or indirectly through its failure to take care of the toxins that pass through it from the blood, as in the case of catarrhal inflammation of the bile-ducts. In any case, colonic lavage at 55 C. (131 F.) is an active means of combating the complex symptoms known under the term cholemia.

3. *The auto-intoxication arising from suppression of the renal function* we term uremia. In pronounced cases with severe symptoms of uremia, the kidneys show far advanced pathologic lesions, and such cases result in death. Marked renal disturbances, such as congestion, in which the function is inadequate, and the uremic symptoms quite pronounced, are, on the other hand, promptly restored by colonic lavage. In many cases of pathologic lesions, too, the results obtained by colonic lavage are certainly gratifying. The increased flow of blood through the kidney, the increase in its functional activity, the removal of the congestion, etc., as produced by the colonic lavage at high temperatures, together with the increased vicarious action of the intestinal tract and the skin, these relieve the crippled kidney and give it sufficient opportunity to recover. In these cases the lavage does not only improve the functional efficiency of the kidney, but other organs suffering from retained toxic substances are affected, and thus help to improve the general circulation. The result of colonic lavage certainly seems to the author more effective than the direct treatment with diuretics and renal medical stimulants, though these are by no means to be entirely disregarded.

4. The skin is capable of excreting toxic substances. This excretion can be materially increased by the increased circulation of the heated blood as resulting from lavage. The heated blood is carried to the periphery, and becomes a powerful factor in stimulating the sweat-glands to increased elimination. Other methods are

used to produce this end, but this method has the advantage that it does not debilitate the patient.

From what has been said of the effects produced by colonic lavage on the gastro-intestinal tract, on the liver, kidney and skin, it is clear that the result of the treatment must be valuable in various forms of auto-intoxication with an improvement in the general and local circulation, including the circulation of the lymphatics. The result, in turn, effects an increased leucocytosis, and thus gives another powerful aid in combating various forms of sepsis and auto-intoxication.

Further observations are to be published later.

A FURTHER REPORT ON THE USE OF "ANTIPHTHISIC SERUM, T. R." (FISCH) IN TUBERCULOSIS.

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In this paper I desire to supplement my recent report on serum therapy[1]. I therefore shall not attempt to enter into the histories and descriptions of individual cases, but will give a summary of cases treated and form a few general deductions.

The report includes only those cases treated with "Antiphthisic Serum, T. R.;" time covered by the treatment twenty-one months; number of cases treated, fifty.

For convenience of description I shall arrange the cases into two groups: 1. Those in the first class were in the earliest incipient stage and had not advanced to the stage of expectoration in which bacilli could be found. 2. Those in the second class had advanced to the stage of expectoration with bacilli present.

There are nineteen cases belonging to the first class. These cases gave the usual symptoms belonging to the incipient stage. The majority of them gave a strong tuberculous family history, and had been sent to Colorado by their physicians. The tuberculin test was made in thirteen members of this class, followed by reactions. The remaining six cases had symptoms equally pronounced, but were not subjected to the tuberculin test. Without a single exception each case belonging to the first group made rapid improvement under the serum treatment. At the close of the treatment they were again subjected to the "O. T." test and failed to react. Furthermore there has been but one case of this group that relapsed after improving under the serum. The patient remained in good health for nine months before relapsing. Treatment was then resumed and continued for five months, during which time all symptoms disappeared. At the expiration of this time the tuberculin test was given, without reaction. The patient is now in excellent health.

The second class embraces thirty-one cases. Of this number eleven were in the incipient stage and twenty were advanced cases. Of the eleven belonging to the early-stage class, four were cured, the bacilli disappearing completely. Five cases made distinct improvement, but the serum was discontinued too soon. Two cases are improving and the treatment is continued. Of the twenty advanced cases, four made distinct improvement. Seven improved slightly, but subsequently failed. Three made no improvement, and six died. I should state however, that one of the deaths was due to pneumonia, the result of exposure, involving the unaffected lung. I should also state in this connection that many of the cases included were under the serum treatment but a short time. Experience has proven that best effects may be expected only after an extended use of the serum. In many of the advanced cases the serum was discontinued as soon as I became convinced that nothing could be expected from it.

Until recently I have made no effort to select cases. This was done for the purpose of ascertaining from actual experience the advantages to be expected from the treatment in the various stages of the disease.

It is a well-known fact that the majority of persons in the early stage of the disease are not easy to convince of the necessity of supplementing the climate of Colorado with treatment. But when patients test climate and find it insufficient to bring about a cure, they are ready to accept almost any treatment that is recommended to them. Hence, there is always an abundance of those patients in the last stage of the disease willing to try almost any serum treatment. The patients whom I have accepted have, as a rule, used the treatment judiciously.

I regret to state that in almost all advanced cases the benefit has been slight. It has possibly prolonged life. But in the well-advanced cases, I doubt if the serum is able to even prolong life to any great extent.

Three of the foregoing cases were of long standing and were in the last stage of the disease, with extensive involvement of tissues, when beginning the serum. This was early in my experience with serum, and I advised its use as a last resort. Each of these patients continued its daily use for five months. At the time of beginning the serum I believed they had but a few weeks to live. Each patient made slow but distinct progress. It may also be of interest to note that from twelve to fifteen months have elapsed since stopping the treatment, and these three patients are alive to-day. Two of this number are now in moderately fair health—the disease having assumed a chronic form—but by no means cured. The third patient relapsed about nine months after stopping the treatment, the result of his own imprudence, and is now in a very low condition.

I mention these three cases, not for the purpose of showing that the serum is capable of curing cases after they reach such an advanced stage of the disease, but to show that the disease may be temporarily checked and the lives of such persons indefinitely prolonged.

I wish to dwell particularly on a class of cases which has been exceedingly interesting to me. I shall report a single case to serve as a type:

CASE 1.—Miss X., a lady whose family history was good and whose former health had been excellent, had been overworking in college and at the same time had been living with a family in which there was an advanced case of tuberculosis. She suddenly began to fail in weight and strength. A troublesome cough developed, with very little expectoration. Frequent pains were also experienced in the lungs.

I saw the patient early, and an examination revealed extensive infiltration of the right lung with râles, rapid pulse and fever. Examination of sputum failed to reveal bacilli. I gave the tuberculin test (1 mg. "O.T.") which was followed by a pronounced reaction lasting two days. Immediately after recovering from the reaction of the test I began the use of the serum. The improvement has been rapid and continuous. After three months' treatment the patient is apparently well; all symptoms have disappeared; the lung has cleared. The treatment, however, is continued.

I have found it advisable to continue the serum for

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[1] N. Y. Med. Jour., March 25 to April 8, 1899; Journal, April 1, p. 724.

several months after all symptoms have disappeared. The final tuberculin test will be given before discharging the patient.

We frequently meet with cases which give a history of tuberculosis of long standing, in which there is more or less expectoration, and evidence of a cavity. Such patients usually have no fever, chills or night sweats. They show no, or very little, emaciation, sleep well and have a good appetite. The pulse is close to normal; but there is more or less dyspnea after exercising.

I shall now report a case of this interesting type which was recently referred to me for treatment. The diagnosis was well established, being a case of pulmonary tuberculosis of eight years' standing. The report is as follows:

Mr. M., aged 40 years, a native of Kentucky, contracted la grippe in 1891, and tuberculosis developed, with hemorrhages. Bacilli were present. Tuberculin treatment was commenced in 1892 and continued for eighteen months.

The patient consulted me April 19, 1899. Examination revealed a large cavity in the upper lobe of the right lung. Temperature was normal; pulse was slightly accelerated; appetite and sleep were good; there was slight dyspnea following exercise. The remarkable feature of the case was the profuse expectoration, there being four ounces of sputum in twenty-four hours by measurement. The most interesting feature of the case was the absence of bacilli.

I immediately placed him under "Antiphthisic Serum, T.R." He has now been under treatment six weeks. The quantity of sputum has diminished two-thirds. There has been a gain in weight and strength and in all other respects there has been marked improvement. Treatment is being continued.

There is one other point which has recently been impressed on me with greater force than ever before. To more clearly explain the point to which I refer, I will briefly report a case.

Mr. J. T. S., aged 26 years, a native of Ohio, presented himself early last December for diagnosis. He gave a history of several light hemorrhages in June, 1896. Troublesome dry cough followed, with small quantity of expectoration. His physician examined the sputum and found bacilli. He immediately came to Colorado.

His health remained good after coming to Colorado, until a short time previous to the time of consulting me. About this time a cough developed, accompanied by slight expectoration. Examination revealed a slight lesion in the upper lobe of the left lung. Temperature and pulse were normal. Repeated examinations of sputum failed to reveal bacilli. Notwithstanding the absence of bacilli in the sputum, I advised the patient to begin the serum, which he did at once.

The serum was faithfully administered from December 19, 1898, until April 3, 1899. The sputum was frequently examined during this period, always with negative results. At the expiration of four months the unpleasant symptoms had disappeared. I discontinued the serum and gave the initial tuberculin test, 1 mg., with no reaction. Two days later I gave 5 mg., which was followed by a severe reaction; high fever, chills, night sweats and profound weakness. The effects of this test lasted several days. In the meantime I resumed the use of the serum.

Soon after giving the test the sputum was examined and bacilli were abundant. The quantity of sputum however, was very small. Following the test, several days passed without expectoration. After the effects of the test had passed the patient began to improve, gaining in weight and strength. Expectoration rapidly diminished. There is now no sputum for study.

Examination of the lungs now fails to reveal any evidence of former trouble; no râles are present, and the patient is feeling better than for years.

EFFECTS OF SERUM.

1. In well-advanced cases the serum invariably causes an elevation of temperature, which usually occurs from three to six hours after its administration. The temperature at such times frequently reaches 100 to 104, but remains high only for a short period. At first I was in doubt as to the cause of this marked elevation of temperature. It was a question as to whether it was due to the serum or the disease. I therefore discontinued the use of the serum for a short period with a few patients who experienced the high temperature following the dose, and in each case the temperature dropped to normal or close to normal. I am unable to account for this fever in advanced cases unless it is due to the cumulative action of the serum, with a greater susceptibility of the advanced cases.

2. We also experience, from a prolonged use of the serum, a more or less extensive infiltration of the areas used for injections. These areas do not become tender or painful, but remain more or less infiltrated. In such cases the skin is not readily elevated from the body; the subcutaneous cellular tissues, being the seat of the infiltration, bind the skin more closely to the deeper tissues of the body.

3. Long and persistent use of the serum produces depressing effects, which are best relieved by a short interval of rest. The treatment should, however, be resumed again with small doses.

4. Sooner or later I have found that the lymphatic glands become tender and enlarged from the use of the serum. In some cases this is experienced within three or four days. In the majority of cases, however, it occurs at the end of a week or ten days. In a few cases this is not experienced until much later, or until the dose is increased.

Greater importance should be attached to the inherent recuperative power possessed by individuals. We frequently meet with patients possessing such feeble resisting power that if tubercle bacilli ever secure a lodging in their tissues all means of remedy seem powerless.

I have frequently seen persons who have been sent to Colorado very soon after their trouble had been recognized, and I have found extensive tissue disintegration already in progress. Such persons can expect little either from climate or serum. It seems, therefore, that the only remedy in such cases lies in our ability to recognize the danger before the person becomes actually infected. Our only hope then lies in our ability to recognize the characteristic symptoms which exist before the disease becomes established, and then to artificially increase the diminished resisting power of the patient.

This brings us to the question of tuberculin test as a means of diagnosis. The advantage of the tuberculin test is two-fold:

1. It serves as a safe and positive means of diagnosis when bacilli are not to be found in the sputum or excreta.

2. It serves as a reliable means of estimating the degree of convalescence.

I wish to state in this connection that I have found the blood-count a greater aid to diagnosis in doubtful or obscure cases, than the study of the sputum.

EFFECT OF THE SERUM UPON THE BLOOD-COUNT.

In cases experiencing good effects of the serum, there is invariably an increase in the percentage of young lymphocytes of the blood. I have found no exception to this rule. On the other hand, in rapidly declining tuberculous cases, I have observed a progressive decrease in the percentage of young lymphocytes.

I have found no exception to this rule. From my own experience it seems to be the case that the more advanced the disease the lower the percentage of young cells.

Furthermore, it has been established beyond a doubt that the lymphatic system has much to do with cell genesis. Hence, since one of the first effects observed from the serum is an enlargement of the lymphatic glands in the region of the injected area, we infer that the serum in some manner increases the functional activity of these glands. I have also observed, from a weekly blood-count in tuberculous cases under the serum, that there has been an increase in the percentage of young cells in cases making improvement.

If we delay a diagnosis until bacilli make their appearance in the sputum, I am convinced that much valuable time is lost. All must agree that one of the chief points of importance in the study of tuberculosis is an early diagnosis. No serious consequence can follow a mistake made on the side of extreme precaution, while on the other hand, a mistake following an imperfect examination, or treating lightly the small signs of early beginnings, is always serious. I make it a rule to use the tuberculin test in all suspicious cases in which bacilli can not be found, before beginning treatment.

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VALUE OF MUSCLE TRAINING IN TREATMENT OF VOCAL DEFECTS.

BY G. HUDSON MAKUEN, M.D.

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PHILADELPHIA.

At the last meeting of this Section, I had the pleasure of reporting five cases of falsetto voice in the male and their successful treatment by means of direct muscle training. As considerable interest was manifested in the subject, I thought it might be well at this time to give a brief outline of the method employed, suggesting some conditions in which it may be indicated and explaining somewhat in detail its practical application.

Whatever may be the remote causes of vocal defects, the direct cause is always a faulty musculation in the vocal mechanism. The method of training hitherto used to correct this faulty musculation has been for the most part an indirect one. It has been an effort to develop the muscles through the medium of approximately correct tones, and the method of direct muscle training, independently of voice, has played but little if any part in the process.

This fact is probably a natural consequence of the popular opinion that the vocal or laryngeal muscles are essentially involuntary, and that they can not be brought under the domain of the will, and of that still more fallacious and popular belief that voluntary effort on the part of these muscles, even if it were possible, would be inconsistent with artistic vocalization. While it is true that the intrinsic muscles of the larynx are for the most part involuntary, we have found that the extrinsic muscles may be brought under direct control of the will, and that the intrinsic muscles may be controlled to some extent indirectly by means of voluntary extrinsic effort. This volitional control should be abandoned as soon as its object, nervimuscular development and harmony of nervimuscular action, has been accomplished; and there will follow a speedy return to the normal automatic action, with all the machinery of voice in a much improved, if not quite perfect, condition. The framework of the larynx is composed of irregularly shaped cartilages articulating at their several points of contact by means of freely movable joints. Those muscles having their attachments only to these cartilages, and whose function it is to assist in the regulation of their relative positions, are called intrinsic muscles; and those running from the cartilages to various points without the larynx are called extrinsic muscles.

The study of intrinsic laryngeal action has been made possible by the introduction of the laryngoscope, and we are all familiar with the diagnostic points of intralaryngeal muscular defection as reflected in the mirror, but how little attention has been given to the action of the larger extrinsic muscles that are more easily studied and equally important in the production of voice.

The action of these latter muscles affects the voice in two ways: 1, by determining the position of the larynx to the adjacent structures; and 2, by determining the position of certain important parts of the larynx in their relation to other parts. The importance of a correct position of the larynx during phonation can not be overestimated, and although opinions differ somewhat on this point, it is probably true that this position should be one of close approximation to the spine, with the posterior surface or plate of the cricoid cartilage fixed against the fifth cervical vertebra.

Mr. John Howard, in his excellent book on "The Physiology of Artistic Singing," has shown that this laryngeal fixation is necessary for two important reasons: 1, it renders possible the tilting of the thyroid on the cricoid cartilage, for cord-stretching purposes; and 2, it furnishes the medium for the transmission of laryngeal vibrations through the spinal column to all portions of the body. Mr. Howard has also shown that the region of the fifth cervical vertebra, because of its comparative freedom from muscular padding and the forward convexity of the spine at this point, is particularly well adapted for contact with the larynx. Against the anterior surfaces of this vertebra the cricoid plate may be held firmly, and on it as a base, the thyroid and arytenoid cartilages may be moved with great accuracy and precision. The tilting of the thyroid cartilage is also almost wholly the result of extrinsic effort, and the degree of the movement may be determined both by observing the character of the voice and by direct ocular and tactile inspection.

Perfect extrinsic action, therefore, would result: 1. in a correct and fixed position of the cricoid cartilage; 2. in an accurate adjustment of the thyroid for every tone, and 3, in a favorable position and action of certain movable structures in the region of the pharynx—notably, the soft palate and tongue, to which these muscles are attached and of which they form a part.

It follows, on the other hand, that a faulty extrinsic action would result: 1, in the displacement of the larynx, either upward, downward or forward, removing it from its normal point of contact with the spine and impairing vocal resonance; 2, in an irregular and inaccurate thyroid tilting, interfering with the evenness of tone and accuracy of pitch; and 3, in a strained and un-

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natural position of the palate, tongue, and lower jaw, interfering with resonance of tone and precision of articulation.

When, therefore, a voice lacks resonance, it is owing in part, at least, to a faulty position both of the larynx and of the aforementioned movable portions of the pharynx; and when the tone lacks evenness, and there is some uncertainty as to pitch, we may look for imperfect movements of the thyroid cartilage and a faulty action of those intrinsic muscles that control the vocal bands—which latter faulty action, as well as the imperfect thyroid tilting, depends directly on defective extrinsic musculation.

Now, having shown that some of the most serious defects of voice, whether it be for speech or song, are dependent entirely on a faulty action of the extrinsic muscles, it remains to consider how this faulty action may best be diagnosticated and corrected. One object in the presentation of this paper is to offer a plea for an accurate diagnosis in defects of voice and direct muscle training as a means of treatment; to show that this method is possible and how it may be more rational and scientific than the one hitherto employed. In the first place, we must know the anatomy and physiology of the larynx and pharynx, the attachments of all the muscles, both intrinsic and extrinsic and the effect of the contraction of these muscles not only on the larynx, but on the resultant voice.

To carry the principle into the treatment of minor defects of voice and into the finer points of vocal culture, one would have to be an expert vocalist as well as a physiologist; but in the treatment of gross defects, such as come under the observation of the physician, the knowledge of vocal technic is not so essential. It is sufficient, having recognized the defect, to be able to determine on what condition of the larynx such a defect must depend, and furthermore, what faulty extrinsic muscular action can bring about this condition.

For instance, if we find a thin piping voice in a male, such as in my reported cases, we know we have impaired resonance and we look for laryngeal displacement; and as the pitch is too high, this displacement must be upward and away from the point of the greatest convexity of the spine.

In one of my cases, on examination externally, with the collar removed, the larynx was found to be nearly an inch above its normal position and resting on a thick cushion of muscles. There was a marked overaction of what may be called the levator laryngei muscles, which not only pulled the larynx upward, thus disconnecting it from the spine and destroying the resonance, but also assisted in tilting the thyroid forward, thus increasing the tension of the vocal bands and raising the pitch to a most unnatural key.

If, on the other hand, we have a lack of evenness of tone, we shall always find an irregular and spasmodic action of the thyroid tilting muscles, affecting also, as I have indicated above, the action of the intrinsic muscles controlling the vocal bands. Even the articulation of both the speaking and singing voice is greatly impaired also by a faulty action of the extrinsic larnygeal muscles, for the reason that some of the important muscles of articulation, the palatopharyngei for instance, and the hyoglossus and geniohyoglossus, have their lower attachments to the larynx.

As I have said, the normal action of the laryngeal muscles is automatic, and in the use of the normal voice in speech and song, there is little, if any, volitional control. This is as it should be, but when for any reason the normal automatic action becomes impaired, the surest, speediest, and most scientific method in many cases would seem to be to establish a correct action under volitional control for purposes of nervimuscular development and accurate co-ordination, and to continue this volitional exercise until the normal automatic action be re-established. Moreover, in the production of voice, all the laryngeal and pharyngeal muscles are in action, and vocal defects are quite as often the result of hypokinesis—too little action—as of hyperkinesis—too much action. The condition is similar to that of the eye, known as heterophoria, and the treatment should be along the same lines.

If, in our attempt to restore laryngeal balance, we are able by voluntary effort, independently of voice, to develop the weak, inactive muscle or pair of muscles, and thus make it of equal strength with the opposing muscles, we shall unquestionably remove the defect. The following are some of the muscles that I have found to be defective in action and subject to training by this method: the omohyoid, sternohyoid, sternothyroid—all depressor muscles; and the palatopharyngei, stylopharyngei, digastric, stylohyoid, geniohyoid and the hyoglossus—all levator muscles.

These muscles may be brought under direct control of the will either collectively or in pairs. There is a bodily sensation for the contraction of each one of these pairs of muscles, and one for the contraction of all of them combined. The sensation for the contraction of the depressor muscles of the larynx may be experienced by an effort to first fix the position of the clavicles and then to shorten the distance between them and the larynx without crowding with the tongue from above. The inner borders of the sternohyoid muscles may be easily felt by a finger placed in the suprasternal notch, and an effort to draw these borders together will cause an independent contraction of the muscles. A frequently-repeated effort of this kind will soon bring about the desired voluntary contraction, and when this is once accomplished, the development is only a question of time and practice.

The omohyoid is also a muscle over which voluntary control may be easily acquired. The patient is instructed to pull the shoulders backward and downward, thus making this muscle taut; and then with a finger placed on its posterior belly immediately behind the clavicle, to rock the head from side to side, when the movement of the muscle will be felt by the finger. In this way the sensation of its action may be appreciated and a voluntary control of the muscles, one on either side, may be acquired. The action of the stylohyoid may be controlled in the following manner: Grip the hyoid bone with the thumb and index finger at the junction of its body with the greater cornua, where the attachments of these muscles will be found, and then, with an effort to swallow, the muscles will be brought into action and will be distinctly felt under the thumb and finger. If we combine with the effort to swallow a slight sniffing of air through the nose, we shall eliminate, in part at least, the action of the palatopharyngei and get the independent action of the stylohyoid muscles. We then continue this independent action until it has been brought under complete control of the will. In a similar manner all the extrinsic muscles of the larynx may be controlled and developed, and I would suggest this direct muscle training as a valuable and scientific method, not only for the treatment of vocal and speech defects, but also for the training of the voice for singing or speaking.

DISCUSSION.

DR. J. HOMER COULTER, Chicago—I believe the doctor's paper

practically controverts and contradicts much that has been said and written as to voice culture and voice production. He has thoroughly demonstrated a fact which the throat photographs I had hoped to show you to-day would demonstrate to be absolutely true, namely, that the extrinsic muscles are of great importance in producing the resonant and tone qualities of voice, and in giving character to the voice. I am thoroughly convinced from my experiments in photography during phonation, that we have heretofore overestimated the importance of the true vocal cords in the function of voice production, and to as great an extent have correspondingly underestimated the part played by the extrinsic laryngeal muscles. Not that there can not be and is not in many cases voice production without the intervention of these muscles, but to produce a clear, penetrating, resonant and maintained tone such muscles are necessary.

RELATION OF THE NASAL AND ACCESSORY CAVITIES AND DENTAL LESIONS.*

BY D. BRADEN KYLE, M.D.
PHILADELPHIA.

The abnormal and pathologic conditions of the teeth causing nasal obstruction and disturbance may be considered under: 1. Nasal or antral irregularities with secondary lesions of the teeth. 2. Irregularities in formation of the alveolar process, allowing the teeth to penetrate into the antral or nasal cavities, thus permitting the extension of diseased processes.

There is an important relation between stomatology and rhinology. The entire superior maxilla, both as to formation and structure, is dependent on and controlled by nasal lesions in early childhood while the facial bones are flexible and of partly cartilaginous union. Mouth-breathing, particularly during sleep, through increased external pressure both by the air—the internal resistance being lessened—and by the muscular action in attempts at nasal breathing, contracts the arch, causes irregularity in the teeth and a characteristic droop to the nose. The nasal orifice thus narrowed persists even after the cause of the mouth-breathing is removed and the degree of benefit expected by such removal may thus not be realized.

Whatever the cause, obstruction to nasal breathing in children and irregularity in development of the accessory cavities are usually found associated. Generally, bad nutrition, lack of vascular stimulation in the nose may be contributing causes. Cryer has demonstrated the great variation in size and shape of the antrum from a little larger than a pea to three times the usual size and extending under the floor of the nose.

Irruption of teeth into the nose or antrum, or diseased teeth affecting either cavity may be etiologic factors in many cases hitherto obscure. The period after birth up to the time when osseous union occurs is the proper time to correct nasal irregularities and deformities. Possibly the most important causes to be corrected are deflection of the septum and enlargement of the pharyngeal tonsil; the lymphatic temperament is to be considered in making a prognosis in the latter class of cases. Pressure on the face at birth, or placing the child in the same position for weeks, may be the starting-point of facial irregularity.

Irregularly placed teeth usually show a precedent nasal obstruction. This may have been removed or, in the case of the pharyngeal tonsil, may have atrophied in adult life, yet the altered contour of the face and maldevelopment of the upper jaw persists. Thumb-sucking causes a characteristic alteration in the superior maxilla and floor of the nose along the lines of the foregoing.

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The failure, in mouth-breathers, for the upper jaw, ill developed to properly fit with the lower jaw whose development has not been interfered with, is noticeable, and the staring, open-mouthed countenance is partly due to the fact that the masseter muscles have been trained to allow the jaw to hang open instead of holding it closed, a position that persists even after perfect nasal breathing has been established.

I have seen several cases of pericementitis or phagedenic pericementitis of the upper incisor teeth separated by thin laminæ of bone, from a nasal obstructive lesion directly over them. The most plausible explanation of this is that the collection of secretion and irritation consequent on nasal obstruction has affected the underlying root and has forced the tooth down, thus bringing it out of the line of teeth into greater prominence. Now add a uric acid diathesis and there are present all the factors necessary to produce this condition. If instead of some general involvement, such as has been mentioned, the local irritation is kept up, there will be found at the root of the tooth new connective tissue which contracts and continues the pressure and irritation on the tooth with consequent pericementitis and sinus formation. Irregularities of the septum, especially spurs or ridges low down, are the nasal lesions most likely to affect the teeth. This is well illustrated by six cases. The first, a young woman of 18 years, with nasal obstruction, had an elongated incisor tooth, immediately under the nasal lesion, from which there was a pus-like discharge. Five other cases emphasized the fact that the tooth directly in the line of the obstruction and irritation was the only one affected. The reverse of this condition has been observed in a few cases, the nasal and antral lesion being due to extension from diseased teeth by continuity and contiguity of structure. Burchard of Philadelphia reports a case of alveolar abscess of a central incisor, with discharge from one nostril simulating ozena. He calls attention to the fact that the incisor foramen just behind the incisor teeth accounts for the pointing of these abscesses into the nose.

Irregularities in the formation of the accessory cavities will cause irregularity in the upper arch, and predispose to dental lesions as well as nasal disease. This is due not only to the nasal obstruction, but to the circulation in the nasal mucosa by the feeble air-current. Occlusion of the entire nasopharynx has also caused an irregular and malformed upper arch, the roots of the teeth almost penetrating into the nose.

The normal openings into the antrum vary in position and abnormal communication with other sinuses, particularly the frontal, and often prevent a cure by the mere draining of the antrum alone. The great variation of size, position and shape of the antrum, the thickness of the walls which thin with age, the presence of septa make definite rules as to puncture and transillumination impossible. Irruption of teeth into the antrum also shows an irregularity in development. A case was shown to me by Dr. M. H. Cryer of Philadelphia, in which, through an opening drilled into the cavity, we could distinctly make out an irrupted wisdom tooth. Similarly the teeth may irrupt into the nose, as MacCoy has shown, and may account for many of the peculiar neuralgias and apparently incurable catarrhs.

So in ozena, which in reality is only a symptom, the odor may come from a diseased tooth causing accumulation of gas into the antrum, with consequent escape into the nasal cavity, to which latter source the whole of the trouble is wrongly attributed. In the *International Medical Magazine* for December, 1898, I reported five

such cases, under the title "Empyema of the Antrum," for want of a better term. The gases thus originating may be confined in the antrum by obstructive lesion of its outlet, or through failure to find exit until the cavity be filled, which accounts for the remissions in the symptoms. Four of the cases have obstructive nasal lesions whose only significance is the possibility of their being so located as to occlude the antral opening. The fifth case has no nasal lesion, relief being sought from the disagreeable and offensive odor alone. The symptoms vary, depending on the degree of occlusion of the antral opening. There is usually a sense of intranasal pressure gradually increasing in intensity. Pressure-pain is dull; heavy sickening headache markedly increased by stooping forward. Disturbance of the eye, nose and buccal functions may ensue. Percussion over the antrum may give a variation in resonance, although this is of little value, owing to the great variation in the size of the antral cavity. The diagnosis is not easy and may often be made only by exclusion. Transillumination is negative. Lesions of the teeth may call attention to their genetic influence. The history of dental irritation in this region, with subsequent cessation of pain and later development of pressure symptoms in the cheek, with ozena that is continued or interrupted, should always be regarded as suspicious. The systemic phenomena of the presence of pus are usually absent.

DISCUSSION.

Dr. F. J. Quinlan, New York City—I wish to emphasize the relation of the teeth to the upper jaw. It has occurred to me, as I have locked over the cases that I have had the last few years, that many children, including some adults, have deformities that could be eliminated much better if the post-nasal fossa were only relieved of any trouble that may be there. They are afterward crowded together and disturb, to a great extent anatomic arrangement that the Creator has ordained these parts should occupy. It shows us that all this class of cases should be seen early. The moment a face deviates from the normal, and the plane of symmetry is lost, the child should receive our immediate attention. Many cases result from the different deflections the Doctor has referred to, and pressure on the pneumatic spaces, which we know in time result in suppurative diseases. In fact, we know the entire arch is interfered with by faulty mechanism. The faulty contact between the upper and lower maxilla redisturbs the physiology of these parts, and we can readily see how the dentine and hard substances will be affected and these tissues become the seat of disease.

Dr. Geo. C. Stout, Philadelphia—Dr. Kyle entered so thoroughly into the subject that there is but little left to be discussed. There is one point in the etiology which is suggested by the slide showing the tooth in the antrum. I should say that this condition was due to the capsizing of the enamel organ, in utero, from trauma or some abnormal pressure, thus causing the tooth to grow upward instead of downward. This would also explain the cases in which teeth have been found in or on the floor of the nose in adults. Embryologic abnormalities then might be added to the etiologic factors in these cases.

Dr. H. W. Loeb, St. Louis, Mo.—I have been interested in the whole paper, but especially in two or three features of it, because it has been my fortune to see something of the nose and teeth in connection with a man who has done much to make odontology a science—Dr. Angle. Many children who have had adenoids removed, continue to have mouth breathing for some time, in spite of the fact that there is no longer any obstruction from adenoids or other nasal obstruction. The straightening of the teeth, to which I think the Doctor made a slight reference, relieves this. Dr. Angle emphasizes the fact that it is impossible to do anything by straightening the teeth before the adenoids are removed, but after the adenoids are removed this often gives relief. Then as to misplaced teeth in the antrum, a gentleman found a diseased tooth crosswise above the roots of the other teeth, and it excited such symptoms that the patient was treated for some time for antral disease. The symptoms subsided when the tooth was removed. Then if the ethmoidal cells are full of pus we may make a wrong diagnosis. I have made such an error. Having drilled into the antrum of Highmore, I found pus and secured some relief, but the symptoms continued. Some time afterward I evacuated pus from the ethmoidal cells and the antral pus disappeared.

Dr. G. Hudson Makuen, Philadelphia—The relation of the teeth to the maxillary antrum is an exceedingly important question. I once had a very painful experience illustrating this. After the trouble had lasted a day or two a little pus trickled down the side of the tooth, and in another day a little bloody serous discharge set up through the nasal cavity. I was confident that the trouble was due to a diseased tooth, although my dentist insisted that my tooth was all right and had nothing at all to do w... the antral disease. It was only at my very earnest solicitation that he finally, on the fourth day, removed the tooth, and the antral disease was absolutely cured in two or three days. I was interested in this especially because it occurred in my own jaw, and it very clearly demonstrated to me some interesting facts in relation to the antral cavity. One of them was that although there was a good-sized passage beside the tooth into the antrum, through which a small probe or syringe could be passed, yet the antrum discharged from the opening up into the nose, notwithstanding there was an opening downward. I was surprised to hear one gentleman advise the removal of a sound tooth for the treatment of these cases. A diseased tooth may be removed, but we have other methods of treating the cases where the disease does not depend on a diseased tooth. To remove a sound tooth to treat antral disease seems to me to be bad surgery.

Dr. Carolus M. Cobb, Lynn, Mass.—During the last year I have been fortunate enough to see some very good X-ray pictures taken of unerupted teeth, and I think it is frequently possible to locate these teeth, and it saves at least a good deal of surgery if you are absolutely certain whether you have a tooth there or not. I have been very much interested in these pictures, and we have tried several times to take an X-ray picture of the accessory sinuses. I think we shall succeed in getting some that will be very satisfactory, and I hope at some time in the future to show some of them to you. We succeeded, with a very small plate, in taking a picture of one side of the jaw. This plate was three-quarters of an inch wide and an inch long. We have once or twice succeeded in putting the plate inside of the nose, so that we could take the accessory sinuses of one side only and not those of the other. But the method is not yet well enough developed to exhibit.

Dr. B. Alexander Randall, Philadelphia—As to the point just raised by Dr. Cobb, I would call attention to the dangers of trusting too much to X-ray pictures, even when we get them. I have sometimes been misled by them. For instance, an unerupted tooth was shown in the X-ray picture, but it was absolutely unlike the tooth when extracted, as to the formation of its roots and their relation to the antrum. It takes an expert to tell what we may conclude when we have an X-ray picture.

Then I would like to take a ground that may be considered reactionary and contrary to the general trend of opinion at the present time, in regard to the influence of nasal respiration on the formation of the dental arch and the eruption of the teeth. I think this subject has been overdrawn and the cart often placed before the horse. As Dr. Cryer has mentioned, it is about the sixth week of uterine life that the foundation is laid for the dentition, which will be largely responsible for the condition found in later life; and I have seen, clinically, much that wholly contradicts the violent assumption that slight differences of atmospheric pressure above and below the palate will change the shape of this bony arch.

Dr. D. Braden Kyle, Philadelphia—I am obliged to Dr. Stout, who called attention to the point in etiology which I omitted. In regard to Dr. Loeb's remarks in reference to non-erupted teeth, I tried to make a distinction between erupted teeth and those that penetrate. The one is a tooth that is out of place, while the tooth that penetrates is one that is too long for the jaw, or the jaw is too short for the tooth. In regard to the effect of nasal respiration on facial contour, there may be some question. But in over 90 per cent. of cases, where you have an irregular contour of the face you have irregularities in nasal breathing; and where you do not have irregularities in nasal breathing you do not have irregularities in the upper jaw.

THE SEMEOLOGY OF THE ATTITUDE AND MOTOR STATE IN CHILDREN.*

BY SAMUEL W. KELLEY, M.D.

Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons; Pediatrist to the General Hospital.

CLEVELAND, OHIO.

The ailing child tells us little in words. Under 2½ years he tells us nothing of his symptoms. Even in children who talk, sensations are likely to be unnoticed or ill described or wrongly referred. Therefore, when we examine an infant or young child, we expect nothing from subjective symptoms. This makes it the more important that objective symptoms be closely studied and correctly interpreted by the pediatrist.

I would not be understood as belittling the importance of learning the history of a case. I have no patience with the self-confident clinician who places so much reliance in his own learned touch and omniscient glance that he scorns to listen to the history of a case, but proceeds at once to divine a diagnosis.

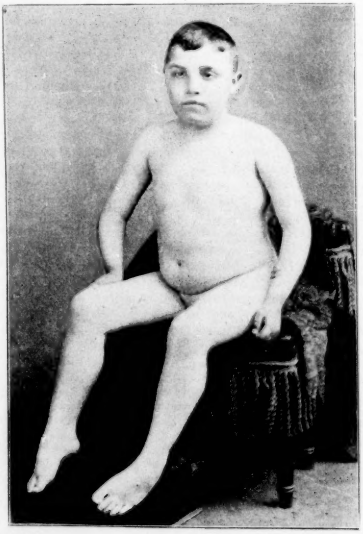

Figure 1.

Much may often be learned from the child's attendant: his name, age, sex, heredity, residence, surroundings—as to hygiene—feeding, previous illness or injuries, onset and duration of the present illness, previous treatment; also the health of brothers and sisters and the prevalence of disease in the neighborhood. Information on all these points should be elicited as completely as possible. But sometimes in hospital or dispensary practice in our great cosmopolitan cities the mother is not present, or she speaks in some outlandish tongue; and nearly always the mother's or nurse's powers of observation are quite limited, and when the patient is too young to have made articulate complaints at home, we get but a limited history of the illness. Thus we are compelled to fall back on the objective symptoms.

It is a time-honored and useful custom to feel the patient's pulse, and a matter of routine to inspect the tongue. Most practitioners perhaps make mental notes of his color and the state of his nutrition. I need not pause to enumerate the whole list of signals by which the organism attacked by disease appeals to us for help, nor is it necessary to precisely fix their relative value; but I wish to put the question: Do we take full advantage of all the objective symptoms and give to each the attention and the value which it should have?

Of all the objective symptoms of disease, I know of none so much watched and relied on by the doctor of to-day as the body temperature. Certainly temperature is an important symptom and well worth watching. But it is not the only figure in the group which makes the picture of disease; though I very much fear that in the view of many physicians the temperature looms up in the foreground so big that all else is either hidden or dwarfed by comparison. The secret of the popularity of this symptom is the clinical thermometer, and the ease of its use. If the stethoscope could recognize and record its findings it would be a much more popular instrument. If the sphygmograph is ever made as simple as the thermometer every doctor will carry one in his pocket and not even trouble himself to feel the pulse. The modern doctor is influenced by the spirit of the times and wishes to be scientifically accurate. It is easy by the aid of a mechanical device to ascertain the temperature with scientific accuracy. But unless the doctor is well trained, systematic and patient, that is about the only accurate observation of symptoms that he does make. I do not decry the use of the thermometer, but that the investigation stops there.

There are other symptoms of disease equally important, and in some cases more important, and equally trustworthy as guides to him who can read them aright. Among these are the attitude and motor state, which are almost inseparably associated.

I wish to formulate a few general principles and also some particulars which will, if true, illustrate the truth of my assertions on the value of these symptoms and draw attention to their importance.

The attitude and motor state are in general more reliable indices in the child than in the adult and in the infant than in the older child. The younger the young patient is, the less are the attitudes and motions dictated by fashion, altered by customary occupation, influenced by habit or affectation, or assumed with the intention of deceiving. They may be modified by bashfulness or fear.

The attitudes and motions of a well child are graceful and easy. If you will allow the expression, even his infantile awkwardness is graceful. Conversely an uncomfortable or restrained attitude or constrained or awkward movement indicates disease or injury. This does not locate the trouble, but should excite our attention and lead to closer scrutiny.

A well child is active while awake and rests quietly while asleep. Conversely, if the conditions are reversed, and the child becomes inactive while awake or restless during sleep something is wrong with him. Curiously enough, his less than normal activity in the waking state may pass unnoticed by the parents for some time, or be forgotten when one inquires into the history of the attack. But an uneasy night's sleep, during which the child tossed and turned and disturbed the mother or nurse, is not apt to pass unnoticed nor

*Presented to the Section on Diseases of Children, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

to be forgotten; and as Meigs and Pepper long ago pointed out, it may be the most certain symptom by which to fix the date of the onset of the disease. But this does not indicate the nature of the attack.

Constitutional diseases affect the entire motor state. Local diseases, excepting those of the nerve-centers affect motor states locally; or they may affect remote parts of the entire physique sympathetically or reflexly. When a local trouble begins to affect the general motor activity it has begun to affect the entire organism, and other constitutional symptoms will be found if searched for.

If you are called to see a child agitated by a general convulsion, you immediately run over in your mind the classification of convulsions and look for other symptoms which will enable you to determine whether it is idiopathic, symptomatic, sympathetic, toxic or thermic. On the other hand, if you find him in a state of general muscular relaxation you know that he has either brain disease or extreme prostration.

When we find that the patient insists on sitting up or reclining against high pillows, we at once suspect heart disease, although it might be asthma or pneumonia, or a double pleurisy with effusion, or even tonsillitis or bronchitis.

When a patient with high temperature and muscular and mental apathy resumes his muscular activity, you know that he is better otherwise. As temperature goes down temper comes up, and with it greater muscular activity. The little patient reaches for and plays with toys which before failed to attract his attention, or he seizes and throws them away, and reaches for something else or tries to go after it. He is better.

When a child which has been sick for some time begins to toss about on the bed, constantly changing position and at rest nowhere, it is a semeion of evil. In the eruptive fevers it may mean the onset of some complication. In croup or other disease of the respiratory tract it indicates very grave air-hunger. If there has been hemorrhage it shows extreme anemia. In all cases it heralds the approach of nervous exhaustion.

You are all familiar with the little sufferer from whooping-cough, and have seen him grasp his mother's clothing or chair or any object near, as soon as he felt the approach of a paroxysm of cough, and hold it fast until the paroxysm passed. Even in severe pneumonia of bronchitis the child does not execute this maneuver, and indeed, in that condition which clinically most resembles whooping-cough, viz., enlargement of the tracheobronchial glands, I have no recollection of ever seeing this apprehension of the approaching kink of coughing and preparation for it by running to a support, clinging and holding on. Have any of you observed this in any other disease than in whooping-cough?

If the child lies on the back and cries whenever touched or moved, one thinks of pleurisy, inflammatory rheumatism, peritonitis, scurvy, pseudoparalysis, extreme rickets, and it is more likely to be one of these than any lesion of the nervous system.

In the child lying on his back with his legs drawn up we suspect peritonitis; but it might be a distended bladder, or hernia. If he draws up his legs to lash out again and twist and turn himself, he likely has irritation and pain, but not inflammation.

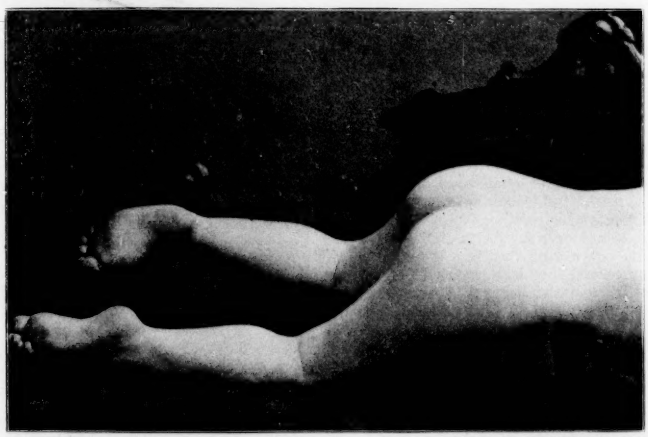

Figure 2.

An attitude on the side, with the extremities in the position of the fetus *in utero*, but with the head retracted, is often seen in the late stages of tubercular meningitis or other intracranial inflammation.

If the child is lying on his face, or is kneeling with his face in the pillow or persistently toward the wall, we suspect inflammation of the eyes or of the brain or its membranes.

If the child persists in nursing from the breast or in lying only on one side, we look for pleurisy or pneumonia in the lowermost side. But if the pleura becomes distended with fluid, the child may turn and prefer the dorsal decubitus, though perhaps still turning the head toward the affected side.

When the patient with empyema, or on whom thoracotomy or resection has been performed, refuses to lie on the affected side it is because the drainage tube is too long or the dressing pads about it not properly placed, or the pillows are so arranged that the wound is drawn asunder.

The retracted head we are all familiar with as a symptom of meningitis, but it may accompany cerebellar

tumor, diphtheria, pneumonia, or even typhoid fever.

With caries of the cervical spine and retropharyngeal abscess, also, there may be rigidity of the cervical muscles. The opposite of this—the head lolling forward on the breast, is seen in paralysis following diphtheria.

Opisthotonos in spinal meningitis or tetanus is well known, but one should bear in mind the possibility of strychnin poisoning. This reminds me that I have more than once seen an immovable lower jaw with high tension of all the muscles resulting from overdosing with nux vomica prescribed for the child as a tonic.

The locked jaw would compel one to consider trismus nascentium and tetanus.

The domain of nervous diseases proper is too large and too intricate for this paper, but I will venture on a few outlines.

It is not common to see in childhood hemiplegia with its lack of knee action and its dragging or circumduction of the lower extremities in walking. The high-stepper with locomotor ataxia is never a child; but the drunken reel or uncertain walk of cerebellar diseases may be seen in childhood. The shuffling walk and scurrying run of the idiot or imbecile child are recognizable on sight. We may find one or more extremities more or less useless, in fact paralyzed, and the questions arise: Is it due to some injury at birth or did it come after birth? Is it peripheral, spinal, or cerebral in origin?

The date of the beginning of the trouble, as given by the parents, is often fallacious; for they may have discovered nothing amiss till the child essayed standing or walking, when they suddenly noticed that something was wrong and imagined it came suddenly. If the paralyzed limb is flaccid the trouble is either peripheral or spinal. If it is spastic or rigid we expect to find other evidence of its cerebral origin. But a rigid muscle or set of muscles is not always due to nervous disease, neither local nor central, but is Nature's effort to immobilize inflamed tissues adjacent, or as we say, results from reflex action. Witness the board-like abdominal muscles in peritonitis and the muscular rigidity which cause the thigh and pelvis to move as one in morbus coxarius.

If a single arm appears paralyzed in a new-born infant, very likely it is a birth palsy; but before concluding that it is due to injury of a nerve alone, it is well to examine closely for fracture of a clavicle or separation of the upper epiphysis of the humerus, which may either simulate paralysis or be associated with it.

If an older child refuses to use his hand or forearm, and we find nothing wrong with them we may discover that his collar-bone is broken. Or he will not put his foot to the floor and after a while it is found that he has psoas abscess, pericecal inflammation, ureteral calculus or a hernia. As to the knee-jerks, it is easy to remember that they are diminished or absent in paralysis of spinal origin, for the spine presides over the reflexes, and is increased in those of cerebral origin; the brain can partly control the reflexes, unless it is impaired.

Speaking generally, the muscular movements elicited by electricity are unchanged in cerebral palsies; but show alteration in the spinal palsies, being diminished or lost in destructive disease of the cord, and increased if the cord is only irritated but not destroyed.

Paralysis of the side of the face at birth is due to pressure on the facial nerve, probably by the blade of the forceps; but facial paralysis in an older child is most likely caused by ear disease.

Fothergill likens the "duck-like walk" or waddle of pseudohypertrophic paralysis to the walk of the reel-foot or double talipes varus.

I present here photographs of a case of pseudohypertrophic paralysis so extensive and so extreme that the boy was scarcely capable of muscular exertion at all. As you see, he looks a very Hercules, but when lying prone he could not turn over without assistance; and he could not raise either hand as high as his mouth without using the other hand to elevate the elbow.

Allow me to remind you of the difficulty of distinguishing, in the infant, between paralysis and that which Fothergill called "the muscular listlessness of malnutrition;" and let me especially advise care in differentiating between true paralysis, the pseudoparalysis of scurvy, and the acute epiphysitis of hereditary syphilis. I have seen the pseudoparalysis of scurvy mistaken for acute

Figure 3.

poliomyelitis; and I have seen syphilitic epiphysitis mistaken for paralysis and for traumatic separation of the epiphysis. Certain complications can be extremely puzzling, for instance, arthritis following scarlatina without eruption, and accompanied with convulsions, in a child afflicted with scurvy.

Muscular as well as mental apathy, listlessness, or aversion to exercise characterizes the rachitic. As I see these little victims of rickets sitting about in the homes of the poor, in hospitals or infant asylums with their big abdomens and slim legs, and their solemn eyes winking seldom and slowly, they always remind me of toads. The illustration of one of these little "human toads" shows the resemblance. Such children dread to be

handled or moved, and they move as seldom as possible, voluntarily. How sadly different from the buoyant, eager, ceaseless activity of healthy childhood!

I have not even mentioned the irregular movements of chorea, the movements of the alæ nasi and the accessory muscles of respiration, in laryngeal and pulmonary diseases; the attitude and motor state characterizing hip-joint disease and simulated hip-joint disease, of tetany, spinal caries and curvatures, the various fractures and dislocations, diseases and injuries of bones and joints, limp from strain or old fracture. Kernig's sign in meningitis, and a score of other symptoms diagnostic or pathognomonic will occur to you, and I hope suggest to one of you to write a good monograph on the subject. I may be wrong in some of my statements, and if so hope to be corrected. But I think enough has been said to demonstrate the importance of the subject for further study and for daily use in practice. I do not for a moment decry the use of all the modern instruments of precision and new methods of investigating disease; for I believe in and use them all; but I wish to draw your attention to the fact that there are methods always open to the physician's unaided powers, which he always has with him in country or in city, day or night; and that these lines of investigation are not only perfectly reliable, but can be advanced by further study.

DISCUSSION.

DR. C. G. SLAGLE, Minneapolis, Minn.—My experience has been that diagnosis in diseases of children is the most difficult of all departments. We will never get old enough or experienced enough to prevent making mistakes in diagnosing these cases. This is particularly true of children under 2 years old, in whom our diagnosis must be largely based on objective signs. For instance, in typhoid fever and some forms of meningitis in young children, it is exceedingly easy to make mistakes in diagnosis. We have recently had, in Minneapolis, an epidemic of a peculiar form of disease that began in such a peculiar way that any physician would hesitate to decide whether the case was one of typhoid fever, with brain symptoms, or true meningitis. In a series of six such cases, coming under my observation, one proved to be true meningitis, and the others typhoid fever. While I was puzzling over these cases I happened to read an article by Dr. Louis Fischer of New York City, in which several cases were reported of what he called "meningitic typhoid fever." This description tallied exactly with that of our cases. When these meningitis symptoms passed away, the typhoid fever was apparent. This error in diagnosis may possibly be guarded against by the use of the Widal test, but I am discussing a paper restricted to clinical diagnosis. I have studied the subject of diagnosis very carefully, and presented it to this Section in a paper at Atlanta, Ga. There is one very striking thing, and that is the remarkable talent a few men possess for making diagnoses, notably Da Costa.

DR. H. E. GARRISON, Dixon, Ill.—This is, to my mind, an exceedingly interesting paper, because of its practical value. We practitioners in the country do not meet with many cases of severe sepsis, or with many complicated cases of germ disease, and can usually allow the germs to finish the war, but we do have numerous illnesses to treat, and we feel greatly helped, therefore, by a paper of this kind, which in condensed form gives us something practical in diagnosis. When it is published in the JOURNAL I shall frequently refer to it for aid in classifying symptoms.

DR. S. W. KELLEY, Cleveland, Ohio—I wish to emphasize the point that we must not forget how to use our hands and our eyes, and how to interpret what we find, even though we may have many instruments of precision to assist us. I have a profound regard for the diagnostic skill and acumen of some of the old clinicians.

DR. SUSSDORF, for the last two years resident physician of the City and County Hospital, San Francisco, Cal., has resigned his position, and Dr. D. A. Hodghead been appointed. The change was made for purely political reasons.

EMERGENCY SURGERY, WITH ESPECIAL REFERENCE TO WORK IN HOMES OF THE POOR.*

BY R. C. DUGAN, M.D.
EYOTA, MINN.

We have all heard the remark, and perhaps made it ourselves: "If we had the case in a hospital we would have operated, but could do nothing under the existing circumstances." The marvelously rapid improvement in hospitals and hospital equipments has made it possible to do a class of surgery that would be all but impossible in private houses, especially in those of the poor with small and perhaps dirty rooms. But, if we accept the responsibility of the care of the poor at all, it is our duty to do the very best for them that circumstances permit.

Schiemelbusch and many others have shown that wound infection is caused by direct contact, and that we have little to fear from the air, unless large quantities of dust are flying. If, then, we carry with us, as we can, in a not very large satchel, previously-sterilized towels, sponge, pads, dressings, etc., we can do clean work almost anywhere that we can find a fire over which to boil instruments and heat water for toilet purposes.

In an attempt to become as near independent of surroundings as possible I have arranged my emergency satchel somewhat after the pattern of McFatrich.

In loops on the side of the satchel are bottles for ether, chloroform, alcohol, needles, rubber tissue drains, iodoform duster, safety pins, also in a bottle, one yard of iodoform gauze, and in a pocket at the end of the satchel a large fountain syringe and tin box containing dry sterilized catgut, silkworm gut and a couple of wire saws.

In the body of the satchel I have an Esmarch bandage and Esmarch inhaler, instrument roll, containing the ordinary emergency instruments, and am particular to have plenty of hemostatic forceps, and sterilized towels and dressings prepared in the following manner: A package of six or eight towels; a package of cotton with box and paper removed, rolled in a towel; twenty or thirty gauze pads for sponges, in another towel; plain gauze cut in five-yard or six-yard pieces, folded twice and rolled up like a bandage. This puts the gauze in a very handy shape for either dressings or bandages. And in doing abdominal work, packing can be run off from one of these rolls after the manner of Deaver's continuous pack, thus avoiding the danger of leaving sponges in the abdomen. These dressings are put in Boeckmann's sterilizer for two hours, then packed in the satchel. Being in separate packages allows the opening of one without disturbing the rest, and if one becomes contaminated it can be thrown aside and a clean one opened.

Strapped to the bottom of the satchel is a double pan for boiling instruments, and on one side a piece of table oil-cloth. As to an operating-table, an ordinary kitchen table folded up and the patient's legs over the end on a pillow on a chair does first-rate for any operations above the knees, and in abdominal work, if desired, the Trendelenburg position can be had by dropping the patient's legs off of the chair and putting some blocks of wood under the table legs, or by turning a chair upside-down on the table, with a quilt on it, and allowing the patient's legs to hang over the lower round of the chair, as described by Mixter.

This outfit is within the reach of any country prac-

*Presented to the Section on Surgery and Anatomy, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

titioner, and I do not think that environment ought to be an excuse for lack of surgical treatment of any case of depressed fracture of the skull, penetrating wounds of the chest or abdomen, appendicitis or intestinal obstruction from any cause, including strangulated hernia, and in any case of hernia operated on an attempt at radical cure should be made.

Senn says all accidental wounds should be treated as septic wounds, and they are, I think, often best treated with moist dressings. For illustration, take a railroad crushing injury to a hand, covered with grease and dirt. After being scrubbed as clean as possible, if flaps are made, sutures placed without tying and the wound packed with moist boric gauze, a moist boric dressing outside covered with rubber or oiled silk protective, the patient or nurse given a bottle of boric acid solution with directions to keep moist through a hole in the protective, it may in a couple of days have the dressing removed and sutures tied with good clean union. On the other hand, if there had been immediate closure and dry dressing, we might have had extensive suppuration.

Wounds already suppurating may be treated with moist dressings in the same manner; or, if deep, and requiring packing, gauze packs dipped in balsam of Peru and castor-oil, as suggested by the late Dr. Van Arsdale, quickly check suppuration and stimulate granulation so that in a short time, even in quite deep cavities, the packing may be left out and closure allowed. In wounds which do not need wet dressing, but require drainage, I prefer the folded rubber tissue of McBurney, to tubes, as it does necessitate removing as early, and does not leave as much scar as when tubes are used.

DISCUSSION.

DR. BROWN of Illinois—I have had a limited experience in surgical practice, but I can demonstrate that ovarian tumors can be removed in the bedroom of a patient at a farm-house; that cases of tubercular peritonitis can be operated on in the same way, and that abdominal hysterectomies can be performed in the farm-house—in the ordinary farm-house—I do not mean the worst or the best. Many of those operations can be performed in the country, and are successful. Surgical cleanliness can be obtained. We people who practice medicine and are called out to the last house at the end of the road, meet cases there of obstetric surgery, and cases recover—because we didn't kill them; there might be a power behind us. They do not all die, and some of them are in the gravest possible condition, which proves that the country doctor can perform aseptic operations, perhaps, if not as often, sometimes as well as some of our more able city surgeons. What I wish to demonstrate is that these things can be done and are done by the country doctor. There is no question about it. It is done more to-day than yesterday, and so on, and will be done more to-morrow than to-day. The hospitals, of course, are the ideal places for these operations under certain circumstances, and still I make this the question right here, that I believe that the ordinary farm-house in the country is preferable to the average city hospital for any kind of surgical work. I believe the environment, the atmosphere and everything surrounding it is better. You do not get that abominable hospital smell in the farm-house! There might be nothing in it, but it is possible that if some of you scientific gentlemen would make cultures of it, all sorts of animals would be found.

DR. H. M. SHERMAN, San Francisco—I wish to add a memorandum regarding the sterilization of instruments at home, and then taking them to the place of the operation. With a fairly complete supply of properly sterilized dressings and suture materials provided by commercial houses, the instruments and the hands are practically all the surgeon has to personally sterilize: The instruments to be sterilized are first wrapped in a clean towel, and in this wrapping they are boiled in the soda solution; when they are taken out they are permitted to drip a few moments, and, the first towel being not unwrapped, other dry towels are put around them, and finally the roll is wrapped up in a rubber cloth. In this shape it can go into the hand satchel, and the instruments will remain hot for more than an hour. The boiling must not be done in any kitchen utensil, but in a special kettle, in which there is no oily residue from cooking. The plan is simple and efficient. If the operator uses gloves, they can be included in the roll with the instruments, but they must not be boiled with them. Rubber stands boiling best if it is in a boric-acid solution, and the gloves, in a separate napkin, should be boiled by themselves, and after the boiling included with the instruments in the roll.

DR. JAMES T. LAWLESS, Toledo, Ohio—There are one or two suggestions that I would like to add in the matter of sterilization of instruments. It makes no difference where you operate if in a clean place—hospital or country home. The point is—the cause of infection is—the physician's hands, the instruments, dressings, and the field of operation. The hands should be cleansed, and the seat of the wound should be thoroughly sterilized. You can use an oven to sterilize your dressings; they should be sterilized at the time—not a day before or an hour before—and brought to the bedside in that condition. Sterilize your towels and put them around the place of operation. If all hospitals are like the Columbus Hospital they are fit to operate in. We have a little hospital in the town where I live that is fit to operate in. Hospitals have these advantages: properly trained nurses and all the conveniences are at hand; you have no delay. These operations can be made in the country, and should be made as patients can not always be transported, but the hospital, always remember, other things being equal, is the proper place. Still, no country practitioner would do his duty if he failed to operate on appendicitis or depression of the skull or anything of that kind for the reason that he could not do it aseptically. It does not make any difference whether he has a particle of bichlorid or any other antiseptics. He can do it aseptically, if the wound has not been infected.

DR. ROSENTHAL of Missouri—For the benefit of Dr. Dugan, I would say that I generally do most of my surgery in the country. About ten years ago I was called into the country to trephine a negro who had been knocked in the head, and it was done in the woods. We had to lay a plank in the corner of a rail fence, and I had very few antiseptic measures with me. But I operated on him and removed two and a half inches of the skull, and he recovered.

DR. R. C. DUGAN, Evota, Minn.—In regard to sterilization of instruments at home, of course, that can be done, but there are very few places where I have been that a man could not find a fire and hot water, and I would rather take the instruments off the stove boiling than handle them over. That is one of the things about sterilization of dressings beforehand that I was shy of. If they had been in the sterilizer two or three days before, I would take the pads to be used for sponges, throw them on the instruments and boil them at the time of operation. The Doctor spoke of sterilizing dressings at the time. That is one of the things that would be very desirable and could be done in the hospital, but can not be done very well at the bedside in the country. That is one of the points I meant to bring out in the paper: that these things could be done in the office, sterilized towels could be carried along, and you could be independent of the place of operation. I do not mean to infer that there is as good work done in the country as in the hospital. If the hospital is convenient, all such cases should be removed there, but good work can be done independently of our surroundings, if we are properly prepared for that kind of work.

THE PROPER PLACE FOR PROPRIETARIES.*

BY J. F. BEERY, M.D.
COLUMBUS, OHIO.

Should one designate to the medical profession that proper place as being at the bottom of the deep blue sea he would, no doubt, strike a responsive chord and receive from its members—especially while in each other's presence—a most hearty approval; and yet, I fancy, should such an edict be ordered and executed, that after the great circle of illumination had climbed the distant mountain, and the moon, in shame, had turned her brilliant face the other way, there would scarcely be diving or fishing room on the great high sea, for the divers and fishermen who would be there seeking their favorite remedies and indispensable specifics. In other words, allow me to make the broad assertion, and I make it without fear of successful contradiction, that proprietary remedies are in existence to-day, and used

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many times to the exclusion of the old reliables, because the medical profession wants it so. In fact, very few patent or proprietary remedies become famous, and hence profitable to the manufacturer, if not endorsed by the medical profession. Not by the leaders of the profession, but by that numerically larger class whose title of "M.D.," in the minds of the masses has a similar significance, and who on occasions of this kind and in society work generally are conspicuous on account of their absence. But as I have rather strongly hinted that some, perhaps all of us are users of proprietary remedies, let us give them an impartial hearing and consider the various phases of the question before deciding either publicly or privately as to their "proper place."

What are proprietary remedies? We have, as a gross distinction, on the one hand, commercial medicine with its widely advertised secret nostrums, and on the other scientific medicine, with its well-known official list of the tried and true. And if the chasm between these two extremes were left thus wide and deep, no sane man would ever think of trying to bridge it.

But the pharmacist, who was once the physician's servant, and who did well to thus serve, either from mercenary motives, or being discontented with his lot, is trying to enslave his former master by putting on the market and on the profession an unlimited number and variety of preparations, to master the half of which would require the lifetime of a Methuselah and the wisdom of a Solomon. But let us be honest and "give the Devil his dues." Some of these preparations are of inestimable value, and did we hew close to the orthodox line, we would deprive suffering humanity the kindly visitation of many a welcome guest. Acetanilid, with its co-workers, for instance, has become a formidable rival of opium and its alkaloids. But, on the other hand, were we to indorse the multiplicity of remedies whose literature fills our waste-baskets and samples of which grace—or rather disgrace—our sewers, suffering humanity would be forced to believe that all the devils that had ever been cast out of the swine—and other people—had been turned loose on them.

Now, where shall we draw the line as to what to use and what not to use? There is no line to be drawn, except as each individual physician draws it for himself, and the appropriateness of the drawing will depend on his individual education and judgment.

Acetanilid, the proprietary name being antifebrin, occupies a place of honor and distinction in the professional armamentarium. Antipyrin was once a patent medicine, but its virtues induced the "British Pharmacopeia" to place it in respectable company by making it an official remedy. Salol, a remedy in which the profession takes great pride and of which its praise has been almost universal, though it bears the revenue stamp and date of patent on every bottle, has had its respectability nationalized by the "American Pharmacopeia."

A certain coal-tar product whose skeleton-bedecked calendars are indicative to the ethical profession of the havoc it has wrought, is but the prototype of a formula that has become famous the world over, namely, acetanilid, 70 per cent., soda bicarbonate 20 per cent., caffein 10 per cent.

A certain rheumatic remedy whose advertisement in the medical journals has attracted the attention of the profession to whom it is exclusively advertised (so they say) by the striking figure that accompanies it, is in itself unique. The manufacturer evidently meant to convey the idea of pleasantness to take and the general effectiveness of the remedy, by the pretty female figure attractively clad, and the smile on the old gouty gourmand's face. But to the ethical physician it tells a different story. Still, if the remedy came to us in the orthodox way, who of us could condemn it? We are told, in justification of the use of these remedies, that their formulæ are known, especially their chemical formulæ. So also are known the chemical formulæ of the proprietary preparations, some of which are a yard long, representing prescriptions of the "shotgun" variety. What cares the physician for chemical formulæ when he is ignorant of the physiologic action of the drug? Physicians are not chemists and, beyond the work of urine analysis, etc., should not be. The physician who spends his time deciphering chemical formulæ has but little time to practice medicine. The object of publishing these formulæ is not to enlighten but to deceive, to give the appearance of respectability to the product in question that it may be endorsed by the medical profession.

Why is it that the profession, in spite of the multiplicity of excellent text-books on materia medica and therapeutics and proficient medical journals devoted to the subject, will use and endorse proprietary remedies? The answer is clear:

1. Because the manufacturers have put some remedies into the hands of the physician, which are jewels, and which the profession would be loath to give up under any circumstances.

2. Having had the endorsement of the profession, of these remedies, others are produced by less reliable manufacturers because of the millions there are in it. And it is simply impossible for any one man to investigate all of them, so he must either reject all, or use the ones that appear to him the most valuable.

3. And, last but not least, because of the shiftlessness of that portion of the profession who are inclined to practice medicine with a formulary rather than dig in the scientific gold mine. The literature (?) and free samples, furnished by the manufacturer, make their arduous labors (?) less irksome still than the formulary. Then in connection with all this the ingenuity of the advertiser is most potent. Many able medical journals sell their advertising space to the highest bidder, oftentimes regardless of the character of the matter he puts into it, and advertisements are made to read like scientific articles, so that the reader must be wide awake and up to date or be deceived, despite the fact that

> Of all hard things to bear and grin,
> The hardest's to know you're taken in.

And then many of these manufacturing establishments publish medical journals (?) of their own, varying in character all the way from an out-and-out-advertisement of the products they make, to a fairly respectable scientific publication. Many of them contain leading articles from reputable men, without any reference whatever to the drugs manufactured. That gives their journal a respectable appearance and is intended to gain the confidence of the medical profession. That confidence once gained it is an easy matter to sell goods. They offer medical men a cash price for these articles, and those members of the profession who have more brain than gold—and are eager to exchange that of which they have the greatest abundance for that of which they have the greatest need, accept their offer, and hence we have in these publications some very creditable medical literature.

Is it not about time to inquire, "whither are we drifting?" If this push and enterprise and commercialism and deception of the manufacturing chemists

continues in the future as it has in the past few years, *they* will be prescribing for our patients and we will only be their "agents" and "pill peddlers." The plea on their part is to relieve the "busy practitioner" of his labor. But that kind of relief will make the physician a dwarf. Do his prescribing and he will become careless in diagnosis. In fact, this multiplicity of remedies presupposes diagnosis in many cases, and treatment becomes mechanical. All this prevents research, and lack of research leads to shallowness. We are already losing our prestige and professional dignity with these manufacturers, as is plainly demonstrated by the character of the literature with which they insult us. They claim to advertise their preparations to us alone, and yet go into the minutiæ of description as to uses, dosage, etc., "that a wayfaring man though a fool" is able to appropriate them to their intended uses. Even their agents who call on us at our offices, presume to know what we want better than we do ourselves.

If we allow ourselves to suffer these indignities now it will only be a matter of time when the laity will lose its regard for the profession, and scientific men will be reduced to the level of commercialism.

What is the remedy? Liberal doses of the only specific known to the medical fraternity and at the same time the only universal antidote that will destroy the virulence of all evils, viz.: *education*. Make the preliminary training in materia medica and therapeutics in our colleges more thorough. Give at least as much time to those branches as is given to anatomy. The average time given anatomy by our medical colleges is five hours per week, while but three hours per week are given to materia medica and therapeutics combined. Reverse that order, or at least make them equal, and the formulary will have a limited sale, and the literature of secret nostrums will find its legitimate way to the waste-basket unopened.

And then let us make the National Pharmacopœia Board responsible, by using only such remedies as they may advise. Instead of one meeting in a decade, let it meet annually, and map out for our overburdened profession the road which it should travel. Not that they should do our thinking for us, but that their deliberations, annually revised, may be an aid to the profession at large in finding the few precious stones that may be imbedded in the sandy shores of the great sea of commercial medicine. I would therefore commit the use of proprietary remedies to the care and keeping of the National Pharmacopeal Board, supported by an intelligent and educated profession.

802 West Broad Street.

INJURIES TO THE EYES FROM ELECTRIC-LIGHT FLASH.

BY WILLIAM H. FOX, M.D.
WASHINGTON, D. C.

Injuries from electricity are becoming more and more common, as its use extends in all directions. The eyes are often implicated in these injuries, and give a peculiar train of symptoms, which are more or less characteristic. Many names have been given to this condition, but the best seems to be that used by Ljubinski[1], "Ophthalmia photo-electrica." We may look upon this subject as presenting two points of interest to the physician: The prevention of these injuries as far as possible, and their relief when they occur. I shall not discuss the question of the ordinary use of electric light and its effect on the eyes, but only such cases as have been exposed to more or less intense action of the light, and where the symptoms are so striking that there is no question as to the cause. Such cases are found among electric workers, or spectators at electric welding, etc., who have neglected to properly protect the eyes. The following case taken from my own practice, may be considered typical, therefore I give it in full:

While E. F. (my patient) and another man were working on a storage battery plant on the afternoon of Dec. 5, 1897, the current was short-circuited. There was a blinding flash and an explosion, the current being of 500 voltage. The man at fault was badly burned and received medical attention at once, but my patient was only temporarily blinded and otherwise felt no ill effects at the time. He continued his work for the remainder of the afternoon as usual. On returning home he had his supper and read the evening newspaper without difficulty. On going to bed his eyes felt a little uncomfortable, but there were no marked symptoms. At 11:30 p. m. he was awakened by intense pain in his eyes and head, and he was unable to open his eyes on account of the pain and photophobia. I saw him at midnight, when his condition was as follows: No marked injury to the face, eyelashes not burned off, eyelids only slightly swollen, right a little more than left, lids tightly closed. On opening the lids, both eyeballs showed intense hyperemia. The cornea of each was clear, and the pupils were contracted to the size of a pinpoint. Vision roughly tested was normal, pain was intense, and of a burning character, with a feeling as if the eyelids were raw or as if foreign bodies were in the eyes. Under hot applications, 4 per cent. cocain instillations, and free use of boric acid, his eyes improved, and, when I left him at 1:15 a. m. he was fairly comfortable. He received a dose of potassium bromid and was asleep before 3 a. m. In the morning his eyes were much better, although there was still some hyperemia and photophobia, slight pain and the pupils were still small. He had no pain during the morning. At 12:45 p. m. the pupils were enlarged under the action of cocain and the hyperemia almost gone; only a few enlarged conjunctival vessels showing remained instead of the deep circumcorneal injection which had formerly been present. He went to work the next day before I saw him and I have not seen him since.

The above is a typical case in every respect, but sometimes we find other complications, as is shown in the following cases:

Rivers[2] reports a case in which the results were much more serious and lasted for several months. In this case the patient was seen about one hour after the accident and the following symptoms noted: The face and hands were badly burned and the eyelashes and eyebrows nearly burned off. On pulling the lids apart the ocular conjunctiva had the appearance of having been painted with a strong solution of nitrate of silver. The cornea of each eye was of the appearance of ground glass.

Here we evidently have a true burn of the cornea and conjunctiva, adding to the severity of the case, and the more serious results must be attributed to this cause. On the other side, Chaudron[3] reports a case and says: "Conjunctiva of lids red, cornea and ocular conjunctiva not affected." All medical men who have reported on the condition of the iris note the contraction of the pupil, but a workman in reporting his own case[4] speaks of the pupil as being "more or less dilated according to the severity of the attack."

Rockliff[5], Brose[6] and Rivers[2] report the effects as coming on almost immediately, but all others give an interval in which there is a nearly complete lack of all

symptoms, the time of onset varying from six hours—Emrys Jones[4]—to twelve or fourteen—Ljubinski[1].

Leaving this part of the subject, we might look at the theories that have been advanced as to the cause and effect of these injuries. We may divide them into two important branches, one, in which the source of injury is discussed, and the other, as to what tissues are involved. In the first case we have to deal with the three sets of rays, given off by the electric flash—the light, heat and chemical.

Gould[7] says: "Ocular injury is due, not to the supposed preponderance in the electric-light rays of violet and ultra-violet—chemical or actinic—waves, but simply to the great number—intensity—of the usual length light-waves." He gives the following table also: "Rendering the yellow rays equal in the spectrum, Myer has analyzed the two forms of electric light, with solar light as term of comparison.

	Gas.	Incandescent.	Arc.
Red	4.70	1.48	2.09
Yellow	1.00	1.00	1.00
Green	0.43	0.62	0.99
Blue	0.23	0.21	0.87
Violet	0.15	0.17	1.07

Terrier[8] also considers the light-rays as propably the active ones in these cases. On the other hand, Charcot[9] thinks it due to the chemical rays. In his paper he compares this injury to sunburn and says it is not the heat-rays that cause the trouble, for sunburn may occur in some cases in the early spring and cool weather—*temps frais*. It is not the light-rays, as with a spark from 100 to 600 couples—Bunsen—or several Rhumkoff coils, with light only of a star, which he could look at without difficulty, the effects were produced. It is chemical, for full protection is found by passing the light through spectacles of oxid of uranium.

Snell[10] and Hill[11] both consider the chemical rays the source of injury, as does also Nodier[12], and S. M. Burnett of Washington, D. C., in discussing a preliminary paper on this subject, before the society there, brings forward the heat rays, as the active agents, as will be shown when the theory of the injury itself is discussed. As to just what that injury is there have been almost as many opinions expressed as there are tissues to be injured. Beginning with the front of the eye, Burnett thinks the injury is done to the corneal epithelium, by the heat-rays, and that they gradually die and become detached from the cornea, leaving the terminal filaments of the nerves bare, thus explaining the temporary freedom from pain before the detachment of the dead epithelium, the intensity and character of the symptoms, due to exposed nerve filaments, and the quick recovery, by the well-known quickness of replacement of the cornea epithelium. In other words, he considers it a burn of the cornea of the first degree.

Gould[7] says: "The fact that photophobia, lachrymation, etc., are not symptoms of retinal lesion or inflammation, seems to make Nodier's assumption purely gratuitous. These symptoms are the infallible results of irritation of external tissues, the conjunctiva, cornea, etc. This irritation certainly exists in electric-light injuries . . . It simply results in vasomotor paralysis, by pure reflex action and there follow, as inevitable and necessary consequences, the outflow of tears, the vascularization—*not* conjunctivitis—of the conjunctiva, etc."

Hill[11] summarizes as follows: "A temporary paralysis of some of the optic nerve terminals is induced by the exposure to the intense light and heat of the electric drill, as shown by the subjective color sensations experienced. The corneal terminals reflexly share in the paralysis; lachrymation and photophobia are absent because the nerve-terminals are paralyzed, and not merely irritated at the time. After the lapse of a few hours, a reaction, with temporary congestion, is set up, as manifested by the acute pain and lachrymation and, probably some mistiness of vision. . . . These cases are, in fact, analogues to snow-blindness and, as in them, the pernicious effects of the electric light are probably due to the ultra-violet rays of the spectrum."

One more theory has been advanced which is worthy of attention. It is that of Nodier[12]. He goes largely into the anatomy of the veins of the eye, showing the two courses which the blood nominally follows, and expresses the following opinion: "We have to do with a hyperemia by stasis, or, if you prefer, a passive hyperemia of the conjunctiva, of which it is necessary to seek the source in the retinal lesion." He considers that the intense action of the electric light on the retina causes a hypercontraction of the ciliary muscles and processes, and this in turn causes an almost complete closure of the venæ vorticosæ and the blood is forced to seek its return through the anterior veins of the eye.

Returning to our own case we find a peculiar train of symptoms coming on several hours after the primary injury was inflicted. The symptoms all point to an extreme irritation of the anterior portion of the eye, especially the ciliary region and iris. Such diverse theories have been advanced, that it may be well to look for other causes, that give similar results. As far as I can find, there are two other sources of injury which have almost identical symptoms. These are snow-blindness, and two cases of accidental local application of extremely strong solutions of sulphate of eserin. In the first of these, the eye has been exposed, usually for some time, to a dazzling light, and the symptoms are practically the same,—photophobia, hyperemia of the conjunctiva, pain, generally of a cutting character, and strong contraction of the pupil. (Reich[12].) Here are the same symptoms, and any of the theories already given might apply. The other cause, strong solutions of eserin sulphate, is one of which I have seen no mention in any publication, and was brought out by a discussion on my preliminary paper on this subject before the society here. Through the courtesy of two of the members, Drs. Wilmer and Dufour, I report them here.

Dr. Wilmer's case was ordered a solution of hydrobromate of homatropia, 2 grains to 1 dram of water, to be used one drop in each eye every fifteen minutes for two hours. By mistake the druggist put up the same strength solution of sulphate of eserin. The patient was brought to Dr. Wilmer's office, with marked symptoms of poisoning, and the following eye symptoms: Conjunctiva very red, deep ciliary congestion, pinhole pupil, photophobia and lachrymation.

Dr. Dufour's case presented the same eye symptoms, but not the constitutional, as the medicine ordered was only 1 grain to 1 dram. The druggist in this case also substituted eserin for homatropia.

These two cases seem to give a clue to the real injury. I think we may dismiss the theory of injury to the corneal epithelium in these cases, and surely there was no injury to the retina, leaving us the ciliary region as the part principally involved.

To my mind, the theory is this: There is an intense irritation of the retina from the light rays, causing an instantaneous hypercontraction of the pupil and ciliary muscle, followed by a temporary paralysis of the ciliary nerve. The intense hypermia which comes on later is

due to the regaining of their functional activity. In fact, I agree with Hill[11] in his theory, except that he considers the chemical rays the active agents, while I consider the light-rays to be the ones that do the damage. I am led to this latter belief by the showing of the small proportion of these rays in the electric light, by Gould[7] and also by the paper of Gould and Fox[14]; where they show quite conclusively that the media of the eye have more or less power to strain or filter out these chemical rays, before they reach the retina. I give a table of the symptoms of the three principal causes of the injuries which we have been discussing.

ELECTRIC FLASH.	SNOW BLINDNESS.	SULPH. OF ESERIN.
Exposure—From instantaneous to moderately long.	Generally rather long.	Sol: gr. i or gr. ii to 3i, locally every 15 minutes for 2 hours.
Immediate Symptoms — Generally none, but may be severe.	Generally none.	After a few installations.
Pupil—Greatly contracted.	Same.	Same.
Lachrymation — Great.	Not excessive.	Great.
Cornea.—Clear. (All but one case.)	Same.	Same.
Pain.—Intense, cutting.	Same.	Same.
After-Images — Chromothropsia.	Erythropsia.	Erythropsia.
Ocula Conjunctiva—Greatly congested.	Same.	Same.
Recovery — Generally complete and rapid.	May be slow, but majority recover.	Recovery complete in the two cases reported.

Turning now to the practical side, on the theory just given, the treatment should be directed to the relief of the intense hyperemia of the ciliary body and iris, and also its accompanying pain and discomfort. These indications are best met by iced cloths applied to the lids, and instillations of solution of atropia, 1 grain to 2 drams of water, for the former, and cocain 4 per cent. and saturated solutions of boric acid, for the latter condition. The injury is rarely or never, permanent, and in the great majority of cases, the effects last from twenty-four to forty-eight hours only.

Ljubinski[1] says that there may be a relapse on the second or even the third night, but no other author mentions such cases. The prognosis, therefore, is very favorable, notwithstanding the severity of the symptoms at the time of the attack. As to prevention, glasses to protect the eyes should be used. The best seem to be those composed of from four to six pieces of red and blue glass placed alternately. (Snell)[10].

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THE GOVERNMENT hospital ship *Missouri* sailed for the Philippines on September 29, with a hospital corps of 150 men.

Therapeutics.

Gastritis.

Van Valzah and Nisbet, in their new work on "Diseases of the Stomach," recommend the following treatment in chronic hypersthenic gastritis: After the initial period is established, the indications are, *a*, to protect the mucous membrane against all forms of irritation; *b*, to maintain the balance of nutrition by a suitable diet; *c*, to control or utilize the excessive secretion; *d*, to treat the gross symptoms; *e*, to prevent stagnation or retention. Tonics, nervines, purgatives, and all drugs which act as local irritants and excitants of secretion should be avoided; indeed not only avoided, but absolutely prohibited.

The diet should contain no condiments, spices, vinegar, highly-seasoned sauces, fermenting or decomposing foods, or alcoholic drinks.

The hyperchlorhydria will be greatly influenced by the protection of the mucous membrane against avoidable irritation. The condition of the nervous system may also be a causative factor in the production of the hyperchlorhydria and every means should then be employed to enforce mental and moral repose. The usual remedies for toning the nervous system should be prescribed, one of the most powerful being the Scottish douche. Gastrospinal and cervicogastric sedative galvanization may be given a trial. To control the excessively acid secretion no remedies are more efficient than the alkaline-sulphate waters of which Carlsbad water is the type. Artificial salts may be prescribed in the following proportions:

Sodium sulphate	50	50
Sodium bicarbonate	40 or	20
Sodium chlorid	10	5

The first proportion (50, 40, 10) is more strongly antacid, and the second (50, 20, 5) acts more decisively on the bowels. A level teaspoonful of the mixed salts, dissolved in a glass of hot water, should be taken, by sips, one hour before breakfast. The dose should be increased—proportionate increase of hot water—or decreased until only one soft movement of the bowels results. The cure should be continued for three to four weeks, the patient taking but little exercise. The Carlsbad cure should not be ordered for the old and the weak, or for patients with valvular heart disease.

A very valuable remedy, both to influence secretion and to allay the excessive irritability and the morbid sensibility of the mucous membrane, is the nitrate of silver (1:2000) douche, employed once a week. Or a tablespoonful of a solution of one grain to two ounces of distilled water may be given every morning on an empty stomach. Theoretically, belladonna, on account of its inhibitory action on secretion, and its diminution of reflexes, is indicated, and practically, it is of very great value when given in small doses (1/50 to 1/20 of a grain) before meals. Subnitrate of bismuth is very valuable when given in the large doses and manner recommended by Fleiner. Small doses of ergot control the excessive flow of blood to the mucous membrane during digestion.

Pain, vomiting, and constipation may require special attention. To relieve the pain, no remedy is so effective as the aqueous extract of opium, which may be combined with a good extract of cannabis indica, and extract of belladonna, 1/10 of a grain of each being employed. These anodynes should only be used when alkalies, diet, rest, the warm compress, belladonna, ergot, Carlsbad salts, nitrate of silver, and bismuth fail to give relief. It is useless to treat the vomiting with a symptomatic remedy, the act being conservative and protective. Better encourage it by giving lukewarm water or wash out the stomach.

In addition to the remedies directed against the conditions which underlie it, during the periodical attacks of gastric intolerance a Winternitz or Priessnitz compress should be placed

on the stomach half an hour before the meal, and kept there during the period of gastric digestion, and in all cases the compress should be worn at night. The constipation is commonly relieved by the prescribed mineral water, but the bowels may exceptionally require evacuation by a warm water enema, to which a teaspoonful of neutral glycerin may be added, or by gluten or glycerin suppositories.

Ewald claims that hydrochloric acid is of the greatest importance in the treatment of chronic gastritis because it not alone replaces the deficiency in the secretion and forms acid albuminates so essential for peptonization, but also because it prevents organic fermentation, or lessens it if already present.

To stimulate glandular secretion Ewald recommends the following prescriptions:

R. Tinct. nucis vomicæ.....3i¼
Decoct. condurango.....℥v

M. Sig. Tablespoonful three or four times daily, half an hour before taking food.

R. Tinct. belladonnæ.....3i¼
Tinct. nucis vomicæ.....3iiss
Tinct. castor canadensis.....3iiss

M. Sig. Twenty drops six times daily. [10 drops is safer.]

ADENASTHENIA GASTRICA.

In adenasthenia gastrica, the following tablet is advised:

R. Quininæ.....gr. 1/5
Ipecacuanhæ.....gr. 1/10
Hydrastinin muriat
Ext. nucis vomicæ, ää.....gr. 1/20

GASTRIC PAIN.

This is not infrequently due to neuralgia, when antipyrin, kryofin or one of the coal-tar analgesics will usually afford relief. Aconite, gelsemium and arsenic are valuable remedies, as well as hyoscyamus, cannabis indica, hydrocyanic acid, belladonna, and chloroform water.

Ewald has found the following combinations useful:

R. Morphinæ hydrochloratis.....gr. iii
Cocainæ hydrochloratis.....gr. v
Tinct. belladonnæ.....3i¼
Aquæ amygdalæ amaræ.....3v

M. Sig. Ten to fifteen drops every hour. Where the pains are very severe, three doses of ten drops each within an hour.

R. Codeinæ phosphatis.....gr. ⅛-¼
Bismuthi subnitratis.....gr. v
Saccheri lactis.....gr. iii

M. Sig. Tal. dos. every two hours.

The following, recommended by Van Valzah and Nisbet, is an excellent gastric analgesic, to which codein may be added when the pain is spasmodic or severe:

R. Ext. belladonnæ
Ext. cannabis indicæ, ää.....gr. 1/10
Ext. coco.....gr. iii

The soothing influence of hot applications should be remembered, in the treatment of all forms of gastric pain save that produced by a local irritant.

Vomiting.

If due to gastric irritation, the stomach should be washed out by lavage or large draughts of tepid water, when an opiate may be administered hypodermically or by rectum.

Oxalate of cerium in full doses, 5 or 6 gr., dry on the tongue is an efficient remedy.

The following recommended by Van Valzah and Nisbet, sometimes acts beneficially:

R. Ext. coco alcoholic exsiccat.....gr. iii
Ext. kola alcoholic exsiccat.....gr. v
Ext. belladonna alcoholic exsiccat.....gr. 1/10

M. Sig. A tablet of this may be allowed to melt on the back part of the tongue, or the mixed powder may be placed there.

The following suppository, recommended by Van Valzah and Nisbet, has a very soothing and quieting influence:

R. Asafœtidæ.....gr. v
Pulv. ext. valerian.....gr. iii
Ol theobrom, q. s.

If there be much prostration, strychnin, hypodermically, is the best palliative, or, if there be much excitement, the phosphate of codein may be given hypodermically, or chloral hydrate by rectum or morphin may be at once used, without trial of less trustworthy remedies. Nitroglycerin may be used to equalize the circulation.

An excellent remedy is cold or heat applied to the spine and to the epigastrium.

The following prescription has been highly recommended by Butler as an excellent and trustworthy gastric sedative:

R. Vini ipecac
Acidi carbolici, ää.....m. i
Sodii bromidi
Sodii bicarbonatis
Bismuthi subnitratis, ää.....gr. x

M. Ft. Chart No. 1.

Acidi tartarici.....gr. vii

M. Ft. Chart No. 1.

Sig. Add the first powder to an ounce of water, and dissolve the tartaric acid in a tablespoonful of water. The liquids should then be mixed and drunk while effervescing.

Treatment of Dermatoses With Artificial Serum.

The beneficial results obtained by Tommasoli and others with subcutaneous injections of artificial serum in cases of extensive burns (see JOURNAL xxxii, p. 30) suggested the idea that the same process might prove effectual in dermatoses of autointoxication origin. Tommasoli reports 10 cases of psoriasis thus treated: 3 were completely cured; 4 very much improved and 3 unaffected. In 8 subjects with severe eczema 6 were entirely cured; 1 improved and 1 unaffected. Four of five cases of pruritus—alcoholic, senile or icteric—were cured with an average of 25 injections, equivalent to 6800 grams of serum—10 to 20 grams sodium chlorid and 5 grams sodium bicarbonate to the liter—injecting first 25 grams and increasing to 100 to 200 and more.—*Semaine Méd.*, September 6.

Value of Strychnin in Pregnant Women.

Tolmatscheff has recorded the results obtained by him in the administration of strychnin in the dose of 1/40 or 1/20 grain twice a day to pregnant women, the drug being given after meals for a period varying from six to ten weeks. He states, as a result of his studies in twelve cases, that strychnin is a valuable remedy to prevent the atonic constipation of pregnancy, and also that he regards it as being an excellent preventive against feeble uterine contractions. He failed to see any instances in which the treatment seemed to produce disadvantageous results. *Revue de Therap. Méd. Chir.; Ther. Gaz.*

Gelatin Treatment of Varicose Ulcers.

Lafond-Grellety reports very successful results with old, extensive varicose ulcers with indurated edges and considerable edema, from the following treatment: The edema is first cured with subcutaneous capillary drainage until the serous discharge has been arrested for twenty-four hours. The granulations are then freshened with nitrate of silver for a couple of days, after which the surface is dressed with cotton dipped in a 10 per cent. solution of gelatin at 37 C., covered with oiled silk or rubber tissue and the limb placed in a horizontal position. The hot gelatin dressing is renewed three or four times a day.

Treatment of Acute Gonorrhea.

P. Albarran asserts that the failure of the usual methods of treating gonorrhea is owing to the folds and crevices of the membrane lining the urethra, in which germs may lurk sheltered from the irrigations. He suggests, and has been very successful with, a method consisting of distending the urethra with air: injecting 2 c.c. of pure ichthyol and 3 c.c. of air with a 10 c.c. syringe inserted through a perforated cone, which serves to prevent the escape of the air, held against the orifice for one to three minutes while the urethra is lightly massaged. —*Revista de Méd. y de Cir.*, August 10.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Pacific Medical Journal, September.

1.— Observations on the History, Psychology and Therapeutics of Impotence. P. C. Remondino.
2.— Feeding of Infants. Hubert N. Rowell.
3.— Treatment of Pneumonia. A. Chase.
4.— Case of Gastric Feeding for Dilated Stomach. Geo. C. Macdonald.
5.— The Doctor and People. Fred Hutchins.
6.— Best Operation for Hemorrhoids. J. Coplin Stinson.

Chicago Medical Recorder, September.

7.— Case of Myxochondro-Endothelioma of the Parotid Region. Richard H. Whitehead.
8.—*Interesting Surgical Cases (Continued). Daniel N. Eisendrath.
9.— Sir Edward Jenner. A Tribute to his Character and Achievements. Albert H. Burr.

The St. Louis Clinique, September.

10.— Case of Chronic Hepatitis Complicated with Gall-Stones, Infarction of Gall-Bladder Sinus, etc. H. L. Gault.
11.— The Southern Illinois Medical Association. Wm. R. MacKenzie.
12.—*Essentials in Chemistry: What the Medical Student Must Know. C. W. Lillie.

Merck's Archives (N. Y.), September.

13.— Soluble Metallic Silver. Horatio C. Wood, Jr.
14.— Some Practical Notes on Ocular Therapeutics. Howard F. Hansell.
15.— Treatment of Acute Cystitis. Milton P. Creel.
16.—*Therapeutics of Hemoptysis. Thomas J. Mays.
17.— Therapeutic Value of Thiocol in Treatment of Pulmonary Tuberculosis. F. W. Frieser.

Chicago Clinic, August.

18.— Clinical Significance of Variations in the Amount of Urinary Solids. J. H. Salisbury.
19.— A Plea for Radical Treatment of Hay-Fever. Chas. E. Clark.
20.— Dislocation of Femur. W. T. Eckley.
21.—*Saturday Lessons in Neurology. Harold N. Moyer.
22.— Fracture of the Shaft of the Radius at the Junction of the Upper and Middle Thirds. T. A. Davis.

Medical Times (Philadelphia), September.

23.— Medical Libraries. A. D. Davidow.
24.— Bacteria in Disease. J. J. Caldwell.
25.— Euphthalmin and Mydriatics which are Favorable for Ophthalmoscopic Examinations. H. Darier.
26.— Severe Case of Puerperal Sepsis Treated by Antistreptococcus Serum and Unguentum Credé. James D. Voorhees.

International Medical Magazine (Philadelphia), September.

27.—*Practical Aspect of Dorsal Percussion, and in Particular of Percussion of Spine. William Ewart.
28.— Bacteriology; Its Practical Value to the General Practitioner. W. Wayne Babcock.
29.— Urinary Retention in the Male: Its Treatment. Orville Horwitz.
30.— Local Treatment of Corneal Ulcer. Walter L. Pyle.
31.— Use and Abuse of the Douche. D. Braden Kyle.
32.— Some Points in Relation to Syphilis. J. D. Thomas.
33.— Prognosis and Treatment of Chronic Sthenic Gastritis (Acid Gastritis Catarrh). Boardman Reed.

Bulletin of the Johns Hopkins Hospital, August-September.

34.— Bibliographic Sketch of John Archer. By One of His Descendants.
35.— Female Poisoners—Ancient and Modern. Charles C. Bombaugh.
36.— History of Medical Department of Transylvania University and Its Faculty. William Jephtha Calvert.
37.— Sketch of John Crawford, M.D. E. F. Cordell.
38.—*Case of Acute Suppurative Cholecystitis with Isolation of the Bacillus Typhosus Eighteen Years After an Attack of Typhoid Fever. Guy L. Hunner.
39.—*Observation on the Origin of Gall-Stone Infections and on Experimental Formation of Gall-Stones. Harvey Cushing.

Canada Lancet (Toronto), September.

40.— Diseases of the Respiratory System. Hector Mackenzie.
41.— Food in Motherhood. Ephraim Cutter.

Canadian Practitioner (Toronto), September.

42.— Home Treatment and Prevention of Pulmonary Tuberculosis. T. F. McMahon.
43.—*Rôle of Wound Infection as a Factor in Causation of Insanity. A. T. Hobbs.
44.— Electrolysis and Cataphoresis in Treatment of Inoperable and Recurrent Malignant Disease. R. N. Fraser.
45.— Medicine in Göttingen. Thomas McCrea.

New England Medical Monthly (Danbury, Conn.), September.

46.— Primary Carcinoma of the Lung. Kurt Wittauer.
47.— Lesions of Tendons and Muscles. Genevieve Clarke.
48.— A Plea for Both the Tuberculous and the General Public. Arch Dixon, Jr.
49.— Use of Ethyl Chlorid as Anesthetic. J. Weisner.
50.— Interesting Case of Ischiorectal Abscess. C. J. Whiton.
51.— Choice of a Reconstructive Agent After Severe Hemorrhage. E. E. Hutchins.
52.— Clinical Experience with Thialion. Lucien Lofton.
53.— Surgical Cure of Hydrocele. D. C. Hawley.
54.— Vasogen in Practice. J. A. Humphrey.
55.— Treatment of Chronic and Acute Diseases of Respiratory Passages with Guaiacol Carbonate and Creosotal. Fritz Hölscher.
56.— Treatment of Puerperal Eclampsia. J. S. Bird.

Therapeutic Gazette (Detroit, Mich.), September 15.

57.—*Treatment of Apoplexy. L. Harrison Mettler.
58.—*Displacement and Dilatation of the Abdominal Organs: Their Relation to Faulty Modes of Dress, and Their Treatment. Boardman Reed.
59.— Note on the Employment of Solutions of Toluidin-Blue in External Inflammatory Diseases of the Eye. Clarence A. Veasey.
60.— Treatment of Summer Diarrhea in Infants. David Bovaird, Jr.
61.—*Preliminary Note on the Use of Asparagus as a Diuretic. H. A. Hare.
62.— Therapeutics of Summer Diarrhea. C. G. Jennings.

Medical Sentinel (Portland, Ore.), September.

63.— Foreign Bodies in the Bladder. R. Harvey Reed.
64.— Quackery—Its Cause, Diagnosis, Prognosis and Treatment. J. P. Tamiesie.
65.— Morphia Poisoning Treated by Permanganate of Potassium. C. E. Wade.
66.— Tubercular Disease in Animals. E. N. Hutchinson.

The Ophthalmic Record, August.

67.—*Uncommon Expressions of Ethmoid Sinus Disease with its Ocular and Orbital Symptoms. Robert Sattler.
68.—*Experience and Operations for Secondary Capsular Membranes. Morrison Ray.
69.—*Significance of Certain Rare Forms of Ametropia. S. D. Risley.
70.— New Instruments for Measuring the Monocular Field of Fixation. F. B. Eaton.
71.—*Quinin Blindness in a Young Girl. H. Moulton.
72.—*A Communication on Acoin. Robert L. Randolph.

American Medical Compend (Toledo, Ohio), September.

73.— Smallpox. Wm. A. Dickey.
74.— Report of Case of Involvement of Appendix in a Tubal Pregnancy. Wm. J. Gillette.

Laryngoscope (St. Louis, Mo.), August.

75.—*Three Cases of Spontaneous Hemorrhage from the Septum. Marcel Natier.
76.—*Prevention of Nasal Catarrh. Frederick C. Rogers.
77.— Asthma as a Reflex Manifestation from Abscess of the Antrum. Charles W. Richardson.
78.— Report of Case of Empyema of Frontal Sinus, with Orbita Abscess - Operation and Cure. Wm. A. Martin.
79.—*Benign Laryngeal Tumors. John M. Ingersoll.
80.—*Some Observations on Anatomy and Physiology of the Ear. W. F. Cole.
81.— Sinus-Thrombosis; Cure without Opening the Sinus. Robert Levy.
82.— Use of Gelato-Glycerin Bougies in the Treatment of Earache. George L. Richards.
83.— Adenoid Vegetations and Diphtheria. A. Plottier.

Western Medical Review (Lincoln, Neb.), September 15.

84.—*Reflex Neuroses from Nasal Obstruction. H. Leslie Burrell.
85.—*A Modification of the Murphy Button. Arthur E. Hertzler.
86.—*Syphilis in the Throat. S. E. Cook.
87.— Pharmacology. A. L. Muirhead.
88.— Case of Imperforate Anus with Fistula. S. C. Beede.
89.— Smallpox in Nebraska City. Claude Watson.
90.—*Clinical Value of Blood Examinations. Fletcher M. Gardner.
91.— Outline for Examination of Stomach Contents. Chas. A. Helvie.
92.— Treatment of Burns. W. D. Otis.
93.— Foreign Body in the Air-Passage, with Report of Case. R. E. Eskildson.
94.— Abortion. A. D. Wilkinson.

Colorado Medical Journal (Denver), September.

95.—*A Study of Trachoma. John Chase.
96.— Bone Necrosis Following Typhoid Fever. Frank Finney.
97.—*Use of Salicin in Treatment of Acute Rheumatism. J. W. Cline.
98.— Abortion: Its Sequelæ and Treatment. P. J. McHugh.
99.—*Treatment of Nose-Bleed. Thomas J. Gallaher.

Occidental Medical Times (San Francisco), September 15.

100.— An Address. Rabbi Jacob Voorsanger.
101.— Valedictory Address at Graduating Exercises of Cooper Medical College. C. N. Ellenwood.
102.— Resection of Rectum and Bladder—Colostotomy—Cure of Artificial Anus—Recovery—Demonstration of Patient. Charles G. Levison.
103.— Relation of Recuperative Powers of Nature to Medical Practice. G. L. Simmons.
104.— A Study of Cesarean Section—Four Cases. W. S. Thorne.

Fort Wayne Medical Journal-Magazine, August.

105.—*Some Tendencies in Abdominal and Pelvic Surgery. Chas. A. L. Reed.
106.— Anemias of Intestinal Origin; Report of Fatal Case with Autopsy. G. W. McCaskey.

Texas Medical Journal (Austin), September.

107.—*Carbolic Acid Poison. Frank Paschal.
108.— City Sanitation. John Rodham.
109.— Home Sanitation. Mrs. A. Fletcher.
110.—*Dental Surgeons in the Armies and Navies. H. S. Stout.
111.— The Squamous Palmar Syphilide. A. H. Ohmann-Dumesnil.

American Gynecological and Obstetrical Journal, September.

112.—*Preliminary Observations on Relation of Some Intrapelvic Conditions to Blood States in Women. Charles A. L. Reed.
113.—*Remarks on the Diagnosis of Puerperal Septicemia. W. Reynolds Wilson.
114.—*Cornual Pregnancy. Charles E. Manierre.
115.— Memoir of Dr. Robert P. Harris. Charles P. Noble.
116.— Collective Reports on Glycerinated Vaccin Lymph. Albert C. Barnes.

117.—Clinical Notes on Protargol in Purulent Diseases of the Eye. Edward S. Peck.
118.—Case of Septicemia Post-Abortum. R. H. Lawrence.
119.—Some Clinical Uses of Boroform. John O. Polak.
120.—Therapeutics of Hot Dry Air. Geo. L. Kessler.

Southern California Practitioner (Los Angeles), September.

121.—Some Recent Literature of Cancer. J. H. McBride.
122.—Cases of Chronic Ascending Paralysis. Chas. L. Stoddard.
123.—*Two Diphtheria Cases Treated by Antitoxin Hypodermically, and Four Cases Immunized per Orem. C. G. Stivers.
124.—The Sigmoid Flexure, with Report of Two Cases of Sigmoiditis. Wellington Burke.
125.—Two Cases of Typhoid Infection without Intestinal Lesions. A. J. Lartigau.

Journal of Mississippi State Medical Association (Biloxi), September.

126.—Acute Lymphadenitis. Report of a Case. L. F. Fox.
127.—Pneumonia; or, Commonly known as Lung Fever. W. W. Robertson.
128.—Some Medical Points. M. J. Lowry.
129.—The Mind in the Presence of Disease. L. M. Guess.
130.—Smallpox in Eastern Virginia. Frank H. Hancock.

Atlanta Journal-Record of Medicine, September.

131.—Pathology of Fever. J. Clarence Johnson.
132.—*Mitral Stenosis. M. F. Carson.
133.—Interesting Case of Appendicitis. W. Hal Moncrief.
134.—Medical Superstitions. D. W. B. Conway.

Pediatrics (N. Y.), September 15.

135.—*Malaria in Children. Dr. Moncorvo.
136.—*Remarks on Scarlet Fever. Walter Suiter.
137.—Specific Necrosis of Shaft of Tibia—Sequestrotomy—Relapse—Cure without Operation. Harry Ling Taylor.
138.—Lateral Pharyngeal Abscess Following Tonsillotomy. Francis Huber.

American Practitioner and News (Louisville, Ky.), August 1.

139.—*Closure of the Abdominal Incision After Laparotomy. A. T. McCormack.
140.—*Use of Chloroform in Labor. Walker Bourne Gossett.
141.—*Suprarenal Extract in Treatment of Addison's Disease. R. Alexander Bate.

New York Medical Journal, September 30.

142.—*Displacements of Heart in Lateral Curvature A Study in Therapeutics. Thomas E. Satterthwaite.
143.—Removal of Foreign Body from Bronchial Tube through Tracheal Opening. Report of a Case. A. Coolidge, Jr.
144.—*New Series of Therapeutic Agents. Karl Schwickerath.
145.—The *Amœba coli* in Disease Henry Gereon Graham.
146.—*Typho-Malarial Fever Charles R. Grandy.
147.—*A Third Report Relating to the Heated-blood Treatment of Croupous Pneumonia. Carl E. Elfstrom.

Medical Record (N. Y.), September 30.

148.—*A Further View of the Management of the Deformity of Hip Disease. A. B. Judson.
149.—*Neglect of Sexual Symptoms in Treatment of Male Genito-Urinary Organs. Follen Cabot.
150.—Induction of Premature Labor in Cases of Albuminuria. Elizabeth Jarrett.
151.—*Toxic Origin of Certain Neuroses and Psychoses. G. W. McCaskey.
152.—Dangers of Headache Powders; Report of a Case, with Tests for the Suspected Ingredients. Jacob Sobel.
153.—Case of Hereditary Arthritis Deformans Terminating in Fatal Pernicious Anemia. John S. Billings, Jr.
154.—Report of Two Cases of Acute Suppurative Osteomyelitis. G. H. Grant.

Medical Review (St. Louis), September 30.

155.—An Epidemic of Pemphigus. Ella Marx.
156.—Case of Traumatic Rupture of the Long Head of the Triceps Extensor Cubiti. Geo. Homan.

Maryland Medical Journal (Baltimore), September 30.

157.—Water-Supply of Baltimore. A Note of Warning About the Contamination of our Water-Supply, with Some Suggestions for its Improvement. Charles O'Donovan.
158.—*Use and Abuse of Nitrate of Silver in Treatment of Ophthalmia of the Newborn. Harry Friedenwald.
159.—Puerperal Sepsis: Report of Case. Flora Pollack.

Boston Medical and Surgical Journal, September 28.

160.—*Completed History of Case of Total Extirpation of Stomach, with Remarks on Surgical Treatment of Gastric Cancer. Maurice H. Richardson.
161.—The Boston Dispensary Clinic in Mental Diseases. Arthur C. Jelly.
162.—*Administration of Ether at the Boston City Hospital. J. B. Blake.
163.—Cyclic or Periodic Vomiting. Albert N. Blodgett.
164.—Dermoid Cyst of Ovary with Twisted Pedicle in a Child of 10 Years; Operation with Recovery. J. V. Meigs.

Philadelphia Medical Journal, September 30.

165.—*Excision of High Rectal Carcinoma without Sacral Resection. N. Senn.
166.—*Tuberculous Peritonitis; Gastrostomy; Acute Appendicitis. Frederic S. Dennis.
167.—How Nature utilizes the Iron Contained in the Blaud Pill. Wm. Henry Porter.
168.—*Use of Thermol in Typhoid Fever. Geo. B. Miller.
169.—Diagnosis of Congenital Disease of the Heart; with Report of Case. J. P. Crozer-Griffith.

Medical News (N. Y.), September 30.

170.—*Diphtheria: Etiology, Diagnosis, Prophylaxis. John Dudley Dunham.
171.—*Suggestions Concerning Early Diagnosis in Pulmonary Tuberculosis. S. G. Bonney.
172.—Some Surgical Aspects of Syphilis. Frank Hartley.
173.—Wound of the Urinary Tract During an Operation for Acute Appendicitis; Spontaneous Closure of Urinary Fistula; Recovery. Chas. A. Powers.
174.—Suggestion as a Means of Producing Sleep in a Patient Said to be Insane. J. M. F. Gibbons.

Cincinnati Lancet-Clinic, September 30.

175.—*Use of Anesthetics in Obstetrics. Wm. D. Porter.
176.—*Comparative Safety of Anesthetics. L. S. Colter.
177.—*Effects of Anesthetics on the Kidneys. Geo. B. Twitchell.

AMERICAN.

8. **Conservative Treatment of Joint Tuberculosis.**—Among his interesting surgical cases, Eisendrath reports his experience with the treatment of joint tuberculosis and cold abscesses by the injection of 10 per cent. solution of iodoform in glycerin, a method first suggested by Mikuliez of Breslau. He briefly reports two cases which are still under treatment, and not having extensive statistics of his own, he quotes from those of Henle, published last year in Brun's *Beitrage*. The method was combined with the venous congestion method of Bier, which consists in applying constriction above a joint to retard the flow of venous blood, but not interfere with the arterial circulation. Henle's tables include 133 cases treated by both methods, in which results were obtained in 95 observed three years after discharge. In 75.8 per cent. the results were good. Of a total of 235 cases treated altogether, 167 were observed three years after discharge, with good results in 70 per cent. The method consists in the injection, at regular intervals, of a 10 per cent. solution of iodoform in glycerin into the tuberculous joint or abscess. The quantity injected varies from 4 c.c. in children to 30 c.c. in adults, and larger doses still in cold abscesses. If in the upper extremities, the patients are allowed to go about at once; if in the lower, they are kept quiet for three or four days. No especially bad effects are observed. The injection is so applied as to affect every part of the joint, and the intervals between injections varies from eight days to four weeks. General treatment must not be neglected, in the way of good nutritious food, milk, out-door life, iron and creosote. Mikuliez only makes it a rule to resect in cases of the knee-joint in adults. In other cases it is necessary only in a very small proportion.

12. **Examination of Urine.**—Lillie considers abnormal urine, tests for albumin and sugar, and thermometers, this paper completing the series on "Essentials in Chemistry."

16. **Therapeutics of Hemoptysis.**—After defining the condition, Mays recognizes the action of the vasomotor nerves in the production of the symptoms, and holds that it may be due to any accident impairing the integrity of the nervous system in general, and particularly the pulmonary nerve supply. Thus he recognizes a pure neurotic, an alcoholic, a syphilitic, and a rheumatic hemoptysis. The evidences of alcoholic action in this direction, and also that of syphilis, he maintains, are clear. Rheumatic hemoptysis is, in his opinion, dependent on the toxic action of uric acid, and among its characteristic symptoms are stiffness of joints, rheumatic family history, pain on pressure between the metacarpal bones of the finger and thumb, aching or numbness in one or both forearms, pain in the chest, dyspnea, and sometimes pain in the right groin. He thinks the most reliable permanent styptic is strychnia, in progressive doses, beginning in the adult at 1/32 gr. four times a day, and gradually increasing to the limit of toleration. Rest is also a vital factor. In the alcoholic form larger doses of strychnia and capsicum are borne than in the other types. In the syphilitic form the specific treatment is called for. The treatment of rheumatic hemoptysis yields, he believes, to the salicylates, and he reports three cases in which these agents produced quick relief, in two of them apparently a good recovery. In treatment of hemoptysis from a lung cavity, the treatment must be somewhat different, absolute rest, cold application and morphin.

21. **Athetosis and Muscular Atrophy.**—Moyer considers athetosis and progressive muscular atrophy, in this installment of his "Saturday Lessons in Neurology."

27. **Dorsal Percussion.**—Ewart's article is rather long, fully illustrated, and so full of details that a satisfactory abstract within reasonable limits is impracticable. The reader is

referred to the paper itself, and it is well worthy of attention.

38. **Cholecystitis.**—Hunner reports a case of suppurative cholecystitis in which the bacillus typhosus was isolated and demonstrated by culture, though the patient's illness dated back eighteen years. The Widal reaction with the patient's blood and the organism was positive with 1:10 and 1:40 solution, and unsatisfactory with the 1:100.

39. **Experimental Cholelithiasis.**—In the discussion of the origin of biliary calculi, Cushing reports a case of inoculation of a culture of Eberth's bacillus in a rabbit's ear, with the result of producing gall-stones.

43.—See abstract in JOURNAL, September 23, ¶ 7, p. 784.

57. **Treatment of Apoplexy.**—Mettler advises, in apoplectic attacks where hemorrhage is known to be the cause, raising the patient to a half sitting position, use of applications of cold to the head and heat to the lower extremities, giving all the fresh air possible, removing constricting clothing from the neck, also the old practice of placing two or three drops of croton-oil on the back of the patient's tongue. As regards bleeding, while sometimes beneficial, he thinks the general rule not to bleed would be better than the practice of doing it. Diuretics are judicious and catheterization is likely to be required sooner or later. Other than this, little is needed for the attack itself. Good nursing is important, also absolute quiet with the head elevated, light diet, gentle sponging of the surface of the body, fresh air, and cheerful invigorating surroundings. He begins massage early, not later than the first or second week, and with it uses a mild induced current every day for a few months. Later the patient is encouraged to attempt voluntary movement. In case of embolism instead of hemorrhage the measures for the attack are somewhat different. We must endeavor to bring the embolus to rest as soon as possible, and depletory measures are not indicated. He thinks it well to at times increase the blood-pressure within the cranium, by applying the Esmarch bandage to the limbs.

58. **Glenard's Disease.**—The subject of Reed's paper includes loose and movable kidney, enteroptosis of the stomach, intestines, etc., also of the uterus. He finds displacement of the abdominal organs much more frequent in women than in men, and attributes it largely to modern methods of dress. He reports two cases and concludes his paper with the following statements: "1. The fact that over one-half the patients examined at my offices during a period of about three years suffered with displacement or dilatation of either one or several of the abdominal organs, shows the enormous frequency of these serious diseased conditions—a state of affairs little understood or appreciated by the profession at large.

"2. The fact that, in so far as the patients or their friends were aware, not more than 1 per cent. of the large number of 362 displacements and dilatations of abdominal organs had been previously diagnosticated, indicates an extraordinary indifference to this important class of cases on the part of physicians generally.

"3. There is a deplorable lack of knowledge of what can be, and is being, done in abdominal displacements and dilatations by simple, safe, and efficient, even though often tedious, non-surgical methods."

61. **Asparagus As a Diuretic.**—Hare reports the results of the use of a fluid extract of asparagus tops in a case of cirrhosis of the liver, with anasarca in which the dropsical symptoms disappeared under the use of the drug. In another case where the dropsy was due to mitral disease, the urine rose from 27 to 40 ounces, and remained near that figure while the drug was continued.

67. **Ethmoid Sinus Disease.**—Sattler points out the obscurity of symptoms in some cases of ethmoid sinus disease, producing persistent fistula in and about the region of the tear sac, burrowing of the contents and discharge into the maxillary sinus, etc. Among the symptoms we have occasionally neuralgia of the nasociliary and supraorbital region, edematous drooping of the upper lid and a chemosis of the conjunctiva, and lateral dislocation of the orbit. He briefly reports cases relieved by operation.

68. **Operation for Secondary Capsular Membranes.**—The operation for thickened capsular membranes after a cataract extraction and their dangers are discussed by Ray, who gives an account of several of the more interesting cases in his practice.

69. **Ametropia.**—Risley reports several cases serving to illustrate the difficulties encountered in certain groups of ametropias, and incidentally the principles that should govern the surgeon in their treatment. The paper is rather technical and difficult to abstract.

71. **Quinin Blindness.**—The case reported by Moulton is that of a child 3 years old, who had been given 10 grains daily of bisulphate of quinin for malaria, for two days, followed the three succeeding days by 20 grains a day, and some days following by 10 again. The blindness was discovered before the quinin was discontinued. Altogether 90 grains had been administered at that time, and 20 grains in addition were received after the discovery. A guarded but not hopeless prognosis was given, and treatment with strychnia and Fowler's solution advised. Twelve weeks later the child began to see a little, and six weeks subsequent to that, vision was good enough for him to pick up small objects on the floor. Moulton does not think the accident of quinin blindness so rare as has been supposed, at least, not as far as regards partial and transient impairment of vision.

72. **Acoin.**—In this article Randolph describes a new local anesthetic related to caffein and theobromin, discovered recently by Trolldenier. It is a white powder, quite soluble in water in the proportions used (4½ gr. to ℥i), and his conclusions from his experience with it, subject to future modifications, are as follows: 1. Acoin in solutions of 1/100 to 1/300 produces satisfactory anesthesia in an unirritated eye in about the same length of time as cocain. 2. In more than one case where the eye was congested, repeated instillations of acoin were inadequate to produce satisfactory anesthesia. 3. Inspection of the cornea with a high power lens failed to show any defects in the epithelium after its use. 4. Acoin has no effect on accommodation. 5. It has no effect on the size of the pupil. 6. It does not increase intraocular tension. 7. Several experiments showed that the staphylococcus pyogenes albus did not grow in agar which contained acoin in the proportion used in the clinic, and furthermore, that exposure of this organism to the action of acoin for twenty-four hours was followed by the death of the organism. This would look as though acoin were not only an inhibitor of the growth of tae staphylococcus albus, but that it also killed this organism after a certain length of time.

75. **Hemorrhage from Septum.**—Three cases are here reported by Natier, one due to rupture of an artery and continuing seventeen days, being finally relieved by the galvanocautery. The second was of fifteen years' duration, due to varicose veins, similarly treated and relieved, and the third of fourteen years' duration, with similar cause, also cauterized and treated by inhalations, and hemorrhage completely checked. The treatment of these hemorrhages, aside from measures immediately required to check the hemorrhage, such as bathing with hot water, tamponing, etc., must be by removal of the cause, and this can be done by cauterizing with caustics or the galvanocautery. He always employs the latter.

76. **Prevention of Nasal Catarrh.**—The article by Rogers is a plea for hygiene of the nasal tract in children, avoidance of unnatural heating in houses and accustoming children to out-door life. In purulent rhinitis continued home treatment with antiseptic solutions several times a day is necessary, with frequent office treatment. Every case of mouth-breathing should be examined to determine the presence or absence of nasal stenosis or adenoid vegetations in the pharynx.

79. **Benign Laryngeal Tumors.**—Ingersoll reports six cases of papillomata and fibromata of the larynx. Treatment consists in thorough removal of the growths.

80. **Anatomy and Physiology of the Ear.**—Cole maintains that sound vibrations are not transmitted through the ossicles, but through the air of the tympanic cavity and fenestra rotunda. His theory is not a new one, for it was held by certain old physiologists, but he has come to his conclusions from his own experiences. He thinks the ossicles are no more than a system of levers to regulate the tension of the membrane, as the bridge and sounding-posts in a violin regulate the tension of the strings.

84. **Reflex Neurosis.**—Burrell reports several cases of reflex trouble, asthma, profuse salivaation, headache and nausea, laryngitis, etc., relieved by treating nasal troubles. He thinks

that notwithstanding the large number of cases reported since the publication of Hack's monograph on this subject, many cases are still overlooked and improperly treated with drugs.

85. **Modification of Murphy Button.**—The modification of the Murphy button, here described by Hertzler, consists in making the bulk of the button, aside from the central tube and clasp, of decalcified bone, which is absorbed by the intestines and the small ferrule of the clasp is easily discharged. The complete button weighs only about one-fourth as much as the regular Murphy button.

86. **Syphilis in the Throat.**—The manifestations of faucial syphilis are here determined by Cook. Aside from the primary lesions they are: Erythema occurring from six weeks to three months after infection, sharply demarcated, usually confined to the soft palate and pillars and occasionally on the tonsils, reddish, almost purplish in hue, sudden in its onset. The mucous patch occurs early and late, generally on the soft palate and pillars and tonsils. The superficial ulceration is a late manifestation occurring several years after the primary sore and, probably, like the deep ulcer, due to the breaking down of a gummy tumor, which ordinarily is not so often observed. He reports a case and discusses the diagnosis. The treatment was with the ordinary specifics. He thinks rather large doses of iodid of potash are needed. In the early stages he would rely on mercurial inunctions. Locally the treatment has to be modified by the situation of the lesions. He has relied largely on iodoform and ether applied with a swab once a day, and frequent topical applications of balsam of Peru. When swallowing is difficult and painful, an application of a 4 per cent. solution of cocain before eating is of service.

90. **Blood Examination.**—In the conclusion of Gardner's paper he enumerates some of the conditions in which blood examination is of value. It is only by this means we can make a diagnosis of relapsing fever, filariasis, or the obscure tropical malarias. Malignant disease, if advanced, may be diagnosed from non-malignant conditions by the presence of nucleated red blood-corpuscles and a large leucocytosis. The only difference between sarcoma and carcinoma is that in the former the blood conditions are worse. Mania may be differentiated from meningitis by the presence of eosinophile cells in large numbers. Influenza in the puerperal condition gives a clinical picture much like that in septicemia, but is distinguishable by the presence of leucocytosis. Measles shows hypoleucytosis with no eosinophiles, while scarlet fever shows the reverse of this condition. While typhoid fever shows leucocytosis, the sudden appearance of polynuclear forms indicates some complication such as perforation. The same is true of pneumonia, nephritis, parotitis, and other acute diseases, and marks the development of pus with the psychologic moment for operation in appendicitis. The absence of the normal leucocytosis during digestion is characteristic of gastric cancer, especially if HCl is absent. If nucleated red cells are also found the proof is absolute.

He says pyosalpinx may be differentiated from extrauterine pregnancy by the presence of polynuclear leucocytosis in the former. Leucocytosis occurring during menstrual suppression and without other assignable cause would be evidence of pregnancy and might sometimes be of value in doubtful cases. In the uric acid diathesis we have around the nucleus of the leucocyte certain little granules, which by the Neisser stain—slightly stronger methyl green than the Ehrlich-Biondi—are colored blue-black. These represent a stage intermediate between nuclein and uric acid and are, if present in any great number, characteristic of this trouble. That property of the serum in typhoid fever which causes the agglutination of the Koch-Eberth bacillus seems to open up a wide vista for the future, also.

95. **Trachoma.**—Chase's article discusses the general subject of trachoma. He finds that the assertion that it is unknown in high altitudes is contradicted by his own experience, as 3 per cent. of his practice consists of cases of this kind, many of them coming from mountain towns at a much greater altitude than Denver. Noticing the symptoms and treatment, he remarks that our ignorance of the true etiology of the disease renders efforts of prophylaxis almost void. As regards its therapeutics, he gives the following "rule of thumb," which he adopted a number of years ago for the guidance of students, and the idea of which he thinks he first obtained from Dr. Eugene Smith of Detroit. 1. Nitrate of silver is required in cases with free discharge. 2. Yellow oxid of mercury ointment is most useful in cases of great hypertrophy of the conjunctiva with liability to hemorrhage. 3. Sulphate of copper best meets the condition of chronic trachoma with little or no hypertrophy or discharge.

97.—See abstract in JOURNAL, July 29, p. 288.

99. **Treatment of Nose-Bleed.**—Gallaher describes the following method of arresting nasal hemorrhage: A piece of cotton as large as the patient's little finger is taken and a piece of string six inches long is tied to its center. The cotton is then introduced through the anterior nares until it is free in the nasopharynx, gentle traction is then made on the string until the cotton is engaged in the posterior nares, which can be told by resistance or by direct vision. I then blow in an antiseptic powder, and pack, against the plug, sterilized gauze in a long and narrow strip. More powder is blown into the meshes of the gauze as we pack to the front. The string should be wrapped around the index finger of the operator, and he should make sufficient traction to hold the posterior plug in place, lest the plug be dislodged and forced into the nasopharynx, defeating our purposes. When we have packed to the anterior nares a pledget of cotton will be all that is needed. In cases in which the hemorrhage has not been alarming, it is well to remove the plug in twenty-four hours. In graver cases it may be left for forty-eight hours, without much danger of producing acute inflammation of the middle ear. The packing should be removed with the utmost care, and in nearly every case its removal is not followed by additional hemorrhage. I first thoroughly saturate the gauze with an antiseptic solution, such as boracic acid, following this up with an injection of 2 per cent. solution of cocain, using it from time to time during the removal of the gauze. I also inject an oily solution such as liquid vaselin. When the posterior plug is reached an additional injection of the oil should be made; then the plug can be gently pulled through the nose by the string which has been kept in front and in the inferior meatus, the oily injection having lubricated the parts. At least ten or fifteen minutes should be taken to remove the plug. In case the plug is not easily dislodged, which is very seldom, it may be pushed back into the nasopharynx, first having additional string tied to the string already in place. The plug may be then removed by the forceps or drawn down and coughed out by the patient himself. This method can not be used in cases of great obstruction in the nostrils and in that case he introduces a soft rubber catheter with a string at its end, catching the catheter in the nasopharynx and drawing it out through the mouth. Then a pledget of cotton is tied to the string and pulled through the posterior nares, the nostril being packed with gauze as well as cotton. In cases of deflected septums occluding the anterior nares, a piece of cotton may be tied to a string, pushed back of the palate and placed in the posterior nares with the finger. He has never seen this complication, but it may occur.

105. **Abdominal and Pelvic Surgery.**—After noticing the early beginnings of abdominal surgery, Reed remarks on the fashions that have existed from time to time in its practice, the use of pessaries, which he now considers pernicious in 99 cases out of 100 and a subject for prayerful consideration in the one remaining; the Sims' operation of incision of the cervix; the universal application of trachelorrhaphy; the removal of cancer of the uterus without total extirpation; the removal of normal ovaries; and the surgery of diseased appendages. He says that in this important department of work the spirit of conservatism is now regnant. It may sometimes be questioned whether it does not go too far, but back of it is the earnest desire and purpose to conserve the best interests of humanity.

107. **Carbolic Acid Poisoning.**—Paschal reports a case where a woman weighing about 120 pounds had taken about 1 oz. of carbolic acid and was treated with success. He remarks that in these cases it is the paralysis of the nerve-centers that is to be feared, and the caustic effect on the intestinal tract is of secondary importance. The treatment to be effective must be prompt, and he would suggest that to use nothing further than antidotes and emetics is only wasting time. Strychnia should be used heroically, as the fight must be made

to get the ascendancy over the depressing effect of the acid on the cerebrospinal centers.

110. **Military Dentistry.**—Stout gives an interesting historical statement of the practice of dentistry in the Confederate army during the Civil War, and claims that while medical director of the Confederate hospitals in the Department of Tennessee, he was the first high military authority to recognize the importance of the services of dental surgeons and the first to use them in army practice.

112. **Blood States and Pelvic Conditions.**—The deviations from the normal standard of the blood in various pelvic conditions in women are discussed at some length by Reed. The first condition is that of infantile genitalia, in which he has observed the blood in two cases. In one of these the organs were so rudimentary that they never reached functional activity, and the blood showed no special abnormality. In the other, while there was an embarrassed function, there was marked anemia, red corpuscles 3,200,000, white 10,000, hemoglobin 60. He suggests that chlorosis is explainable by the fact that sexual maturity has occurred with insufficiently developed ovaries, and that ovarian states, through the sympathetic, exercise a controlling influence over the hemogenic organs. This view is not entirely new, having been suggested by Trousseau and others. In uterine displacement he has been profoundly impressed with the influence of this derangement on the functions of hematogenesis or hematolysis. The most pronounced changes were in cases of retrodisplacement with fixation, the fundus impinging on the sacral plexus. In such cases he has found oligiemia and hypohemaglobinemia. Nearly all are neurasthenic, which he credits to a toxemia. More or less blood disturbance takes place with descensus uteri, and he thinks that this is best explained by considering such conditions of long standing as connected with a more or less general splanchnoptosis. In chronic endometritis there is a slight increase in the number of leucocytes, but in those cases of long standing with menorrhagia and metrorrhagia there is often a veritable oligemia. In pyosalpinx a leucocytosis is present as in suppuration elsewhere. In some cases the diagnosis was materially aided by these facts. In the majority of small ovarian cystomata there is no appreciable blood disturbance. In six out of eight cases of cancer of the uterus, where the disease was limited to the cervix, the leucocytosis was not pronounced, but in the other two, more advanced, the count showed 24,000 to 26,000. He has, however, under observation at the present time, an advanced case with no leucocytosis. Subserous myomata have no appreciable effect, but interstitial and submucous, with polypoid growths, modify the blood by the drain they produce. In many there is a demonstrable oligemia, and in all a marked leucocytosis. In ovarian disorders the condition sometimes approaches closely to chlorosis, and he describes this condition at some length, explaining the condition as disturbances of the spleen and other organs connected with blood production through the sympathetic. In surgical convalescence the blood states are various. Where they were abnormal before, there is a tendency to return to the normal standard, interrupted by transient leucocytosis depending upon the reparative process. In one class of cases, however, where the convalescence is interrupted by neurasthenic symptoms, there is often a very pronounced leucocytosis. He concludes his paper by stating that his observations, though numbering several hundred, are not sufficient to justify final conclusions.

113. **Puerperal Septicemia.**—The possible confusion of puerperal septicemia with typhoid fever, pneumonia, malaria, and puerperal insanity is discussed by Wilson. In puerperal insanity the course of the disease is the best guide. Typhoid is distinguishable by the slowly developing prodromal stage and rose colored spots, with Widal's test. The value of the latter cannot be overestimated. In pneumonia the character of the sputum and early localization of pain are important points, while in malaria the blood test ought to be sufficient to distinguish it, in connection with the history of the case, the periodicity of the cases and the enlargement of the spleen.

114. **Cornual Pregnancy.**—The literature of cornual pregnancy, especially the cases that have been operated on, and the symptoms of the condition, are fairly discussed by Manierre, who reports a personal observation with pathologic findings. The patient's recovery from operation was uneventful.

123. **Diphtheria.**—Stivers reports two cases of diphtheria treated by the injection of 1,000 and 600 units of diphtheria antitoxin respectively, with complete success. The other members of the family were treated with antitoxin given by the mouth, in small quantities of 50 and 100 units, with complete success as far as preventing the spread of the disease.

132.—See abstract in JOURNAL, May 6, p. 997.

135. **Malaria in Children.**—Monocorvo concludes his article on infantile malaria in this number, particularly discussing the therapeutics of the condition. As prophylaxis, he advises change of residence from malarial districts, the use of mosquito-nets, giving children only sterilized water, carefully regulating the diet and using small prophylactic doses of quinin. As regards the therapeutic use of quinin, he says the daily dose for nurslings and for mild cases with older children varies from 25 to 50 cg. In medium cases in older children, he gives 50 to 100 cg. per diem, and in very serious cases he disregards the age and gives from 1.5 to 3 gm. in twenty-four hours. He gives it at intervals of one to two hours, according to the severity of the case. Quinin may be given by the rectum, though he does not find it effective in this way, nor is it of value by the dermic or endermic methods. The hypodermic method, however, has a great future, and he praises both the efficacy and the harmlessness of this. It is necessary to procure a soluble salt in a concentrated form, and all modern aseptic technic must be followed. The injection should be made behind the trochanter or between the shoulder-blades, and deep enough to reach the muscles, as it is thus more certain and painless. He mentions, without expressing a positive opinion, the intravenous method introduced by Baccelli. As regards arsenic, he thinks it valuable as a tonic, but its antimalarial action is too feeble for severe cases. The salicylate of soda has not proved useful, and the cerebral accidents it produces will prevent its general use. As regards the filtered decoction of lemon, advised by some Italian physicians, he has found it hard to administer and would not care to rely on it in pernicious malaria. Antipyrin is highly spoken of, as are also sunflower leaves and flowers, as proposed by certain Russian physicians. Another remedy is methylene blue, which he gives in divided doses of 20 to 30 cg. daily, without especially disagreeable effects. He also speaks favorably of a recent trial of phenocol chlorhydrate given in doses of 25 cg. to 1.5 gm. Asaprol has impressed him favorably from a trial made, but further experience is required. To prevent secondary infection he recommends irrigation of the mouth and nasal cavities with antiseptic solutions, usually boric acid—.5 to 1 per cent.—and salol, bismuth, benzonaphthol, etc., given internally to asepticize the gastro-intestinal tube. He habitually prescribes a mixture containing salicylates of bismuth benzonaphthol and tannigen or tannalbin in diarrhea associated with malaria. For an antipyretic, antipyrin fills all indications. He also recommends hypnotics, trional, chloralose, etc. If the child is overcome by adynamia or algidity, hypodermic injections of ether, camphorated oil or caffein may be used, especially the latter, which, because of its threefold properties—general tonic, cardiac tonic and diuretic—is a most valuable aid. It will also neutralize the physiologic effects of quinin when given in large doses. He ordinarily uses .5 to 1 c. c. of Fauret's solution of caffein, equal to from 12 to 25 cg. of the drug. Care must be used, however, in thus administering caffein to nurslings on account of its action on the medulla. Quinin, however, is still our sheet-anchor in this disease.

136. **Scarlet Fever.**—The principal points in Suiter's article are the prompt, complete and rigid separation of the infected from the uninfected during the entire period of infective danger, and a thorough disinfection of every person or thing that may chance by any possibility to convey the poison. There is no disease, he holds, that can be more certainly placed under restriction if the means are effectively applied, and the failure to eradicate scarlatina is not the failure of the principles of modern sanitary science, but is due to their ineffectual execution.

139. **Closure of Abdominal Incision.**—According to McCormack, the closure of abdominal incision after laparotomy should be as follows: 1, a continuous peritoneal suture of

fine catgut; 2, an interrupted suture of chromicized catgut for the fascia, with four sutures to the inch; 3, a running suture of catgut for the subcutaneous fat; 4, a subcuticular subcutaneous stitch of catgut for the skin. He claims that the necessity for this or some sort of tier suture can hardly be questioned. The time should have long since passed when any surgeon would use the old through-and-through suture unless the patient is in such a state of collapse that haste is a necessity and hernia and infection are secondary matters.

140.—See abstract in JOURNAL, June 10, p. 1321.

141. **Suprarenal Extract.**—Bate reports a case of Addison's disease in which, assuming that the symptoms were due to deficiency of the suprarenal secretion in the system, the treatment was on isopathic principles, 1/12 gr. of the extract of the suprarenal gland of a sheep was administered three times daily and gave great relief. It had apparently been almost specific in this case.

142. **Displacements of the Heart.**—Recognizing the fact that lateral curvature of the spine may disorder the heart, by displacing it, and quoting from Adams in his work on curvature of the spine, as to this condition and its effect, Satterthwaite describes his method of treatment of these cases. It is a modification of that of Professor Hartelius of Stockholm, and consists in some sixteen movements and exercises calculated to straighten the spinal curve, and relieve the pressure on the heart. These are not entirely subjective, but are aided more or less by the operator and are supplemented by massage of the muscles of the back and occasionally the use of the faradic current. The use of carbonated brine baths of the strength of .75 to 1 per cent. and carbonic acid gas .25 to .5 per cent. is also a valuable adjunct. Tonics, such as iron, strychnin, cod-liver oil and malt extracts are also desirable in the majority of cases. Satterthwaite reports and illustrates four cases treated in this way, and describes his method of measurements used in the illustrations. He remarks that it must not be understood that he is opposed to spinal supports, but he considers them palliative rather than curative, and his method here described has a much wider application and is more scientific. The detailed description of the exercises is too lengthy to be given here, and the reader is referred to the paper itself.

144. **New Series of Therapeutic Agents.**—In this preliminary communication, Schwickerath gives a brief account of certain new preparations. In studying antiseptics, he assumes that they act by influencing soil in such a way as to make it unfavorable for germ life, and he conjectures that certain metallic substances, as mercury and silver, when in union with such substances as have a more intimate relation to animal tissues, might be comparatively non-irritating. Nuclein at once suggests itself, and he has succeeded in securing a pure nuclein in the form of an almost white amorphous powder, soluble in warm water and insoluble in alcohol. Adding to a solution of this, which he calls nucleol, freshly precipitated mercuric oxid, the latter is gradually dissolved; then adding alcohol, a voluminous white precipitate is formed which represents a new chemical compound of mercury and nuclein. Silver, copper and iron oxids react in a similar manner. These new compounds are readily soluble in water with neutral or faintly alkaline reaction, and contain the metals in true chemical combination. They do not precipitate solutions of albuminous substances. Thus he holds we have soluble compounds of these metals, whose action on the tissues will be not chemical but physiologic. Clinical experiments with these compounds not only fulfilled but exceeded his expectations. They possess all the therapeutic advantages of their respective inorganic salts without their disadvantages. More detailed information as to the chemistry of these new products, which he has named, mercurol, nargol, cuprol and ferrinol, will be published in some chemical journal.

146. **Typho-Malarial Fever.**—Grandy discusses the history of the adoption of the term typho-malarial fever, and holds that it can be used only under three possible conditions: 1. As a distinct disease, which no one now holds. 2. As a mixed infection, which has not yet been demonstrated. 3. As two coincident diseases, which is a rare occurrence but does not justify a special name. It is used, however, to describe three conditions that have certain points of resemblance: 1. Atypical typhoid fever, where it is entirely erroneous. 2. In a continued form of malarial fever, equally out of place. 3. In cases where typhoid occurs in a malarial subject and the malarial condition is manifest in the beginning and in convalescence, the typhoid only appearing during the height of the disease. He concludes, therefore, that the term is incorrect and should be abandoned.

147. **Heated Blood in Croupous Pneumonia.**—Elfstrom reports three cases, in addition to those already published (*N. Y. Med. Jour.*, Aug. 27 and Oct. 15, 1898), of the treatment by the subcutaneous injection of heated blood previously extracted and diluted with salt solution. Of the nine cases altogether reported, two died, but he claims that these should not be counted, as they were already complicated with meningitis. The percentage of cures therefore is 100 per cent.

148. **Hip Disease.**—Judson advocates training in gait to obviate the deformity so commonly following hip-joint disease. The proper rhythm of locomotion is, in his opinion, one of the most important things in the treatment. He illustrates his paper, showing the effects and defects of treatment in this condition.

149. **Neglect of Sexual Symptoms.**—The following are the conclusions of Cabot's article: 1. Sexual symptoms in genito-urinary practice should be carefully investigated and thoroughly studied. 2. Indiscriminate use of irrigation is distinctly against scientific teaching, its effect on the genital organs often being injurious and causing the spread of the gonococcus. 3. Before urethral instrumentation is employed, every case should be examined per rectum, with a finger educated to the rectal touch. 4. Various forms of remote nervous symptoms are directly traceable to disorders of the sexual organs.

151. **Toxic Origin of Neuroses and Psychoses.**—The theme of McCaskey's paper is the action of toxins in the production of various mental and nervous symptoms, such as vertigo, neuralgic pains, headache, malaise, exhaustion, and local paralyses and spasms. He thinks that if the neurologic study of any given case excludes hysteria and organic disease, a toxic origin must be looked on as possible, and examination made of the urine and the stomach for toxic productions.

158. **Ophthalmia of Newborn.**—Friedenwald criticizes the tendency to overdo the use of nitrate of silver, though maintaining the importance of its employment. A 2 per cent. solution should not be exceeded, and it should be used in strict accordance with Credé's method.

160. **Gastrectomy.**—Richardson reports the after-history of the case of gastrectomy reported in the *Boston Medical and Surgical Journal* of Oct. 20, 1898. A recurrence of the disease was detected in November, and the patient died Feb. 19, 1899, of intestinal obstruction and exhaustion. At the autopsy the joining of the duodenum and esophagus was found intact except at the base of the sinus. He considers the operation of gastrectomy rarely advisable.

162. **Ether Administration.**—Blake describes the method of ether administration at the Boston City Hospital, and claims that it is given on an average better in and about Boston than in any other place in the world, London possibly excepted, and that its methods have greatly improved within the past ten years.

165. **Rectal Carcinoma.**—After noticing the history of operations for rectal malignant disease, Senn states that he wishes to put himself on record as opposed to the sacral route for radical removal of the carcinomatous rectum. He is convinced that all legitimate and well-grounded indications for the radical removal of high rectal carcinoma can be met and ample room for the operation secured by primary excision of the coccyx. In case of extirpation of the rectum below the peritoneal reflexion, even the removal of the coccyx is superfluous. In excision of the upper portion of the rectum, the peritoneal cavity must be freely opened, and ample space for this is usually afforded by removal of the coccyx. When this is not sufficient, the combined operation is preferable. He trusts that the Kraske operation will soon become obsolete in this country. He reports two cases in support of his views: in one the disease involved at least 5½ inches of the rectum without causing serious mechanical obstruction; the other was of high primary origin and was characterized by symptoms indicating mechan-

ical obstruction in the lower intestinal tract. In the first case, the excision necessarily included the sphincter and it was impossible to bring the proximal end down to the level of the anus, and a sacral anus was necessitated. In the second case the lower portion of the rectum remained intact, and he was able to preserve the sphincter by making a circular incision and suturing the proximal and distal ends over the anterior two-thirds of the bowel. A temporary coccygeal anus was necessitated, but this lasted less than two months.

166. **Tuberculous Peritonitis, Gastrostomy and Appendicitis.**—Dennis' paper, concluded from a former number, advises early laparotomy in cases of tubercular peritonitis. As regards gastrostomy, he eulogizes Marwedel's operation as the perfect one of its kind, and reports a case. He formulates rules for guidance as to operation in acute appendicitis.

168. **Thermol in Typhoid.**—This drug is reported on by Miller, who gives a history of eight cases with temperature diagrams, treated by this agent. He claims that it is non-toxic, that it is devoid of irritating properties. The method of its administration is important. His patients were given 2½ grains every three hours, even when the temperature was subnormal, and continued through the whole course of the disease until the temperature remained at normal for a week. He thinks it a far superior remedial agent to the bath and more convenient to administer.

170. **Diphtheria.**—Dunham believes that all persons who harbor the Klebs-Loeffler bacillus in their throats should be isolated, though healthy, and he gives a table of the results of examination of the throats of eleven physicians who had been treating various forms of this disease. In two instances, where diphtheria had been treated, the bacillus was found in the throats. He recommends the following precautions for the restriction of diphtheria: 1. The bacteriologic examination of every patient with a sore throat, not only for the sake of the patient, but also in the interest of others, who, when infected, may have a more serious form of the disease. 2. The isolation, when practicable, and an attempt at the removal of diphtheria bacilli in every case of convalescents and others harboring the germs in their throats. 3. A watchful care should be exercised by physicians to avoid contamination from diphtheria patients, and efforts should be made to free their throats of germs when present.

171. **Tuberculosis, Its Early Diagnosis.**—Bonney suggests close and repeated examinations in case of the existence of any suspicious symptoms. He ends by saying he would especially condemn: 1. Delay in instituting any physical examination whatever until long after the development of pronounced constitutional and pulmonary impairment. 2. Failure to examine on the bare skin, the presence of clothing effectually preventing any approach to accurate results. 3. Neglect to examine the entire chest, the bases, interscapular spaces, and axillary regions being frequently overlooked. He would particularly deplore the existence of: 1. Erroneous conceptions concerning the significance of the absence of percussion-dulness at the apices, an active process often being capable of recognition by auscultation considerably before the evidences of consolidation are apparent. 2. The non-recognition, in the absence of râles, of the various modifications in disease of the normal respiratory sounds. 3. Inaccurate interpretation of localized diminished intensity of auscultatory sounds, elevation of pitch, harshness of quality and prolongation of expiration. He would severely criticize: 1. Failure to utilize cough preceding forced inspiration in eliciting the presence of slight moisture in the finer tubes. 2. The non-appreciation of the almost pathognomonic significance of a circumscribed bronchiolitis, even in the absence of dulness or other auscultatory signs.

175. **Anesthetics in Obstetrics.**—Porter advocates the use of chloroform in obstetrics, believing that the factor of safety is increased by the condition of the patient, though it is a matter to consider that there is danger in its employment. It is generally useful in the second stage, but in a few cases where the pains are weak, and suffering severe in the first stage, it may be advisable. It is also indicated in tedious cases where the cause of the delay is not known, in order to permit a thorough examination for diagnostic purposes.

176. **Comparative Safety of Anesthetics.**—The subject of the comparative safety of ether and chloroform is discussed by Coulter, who quotes Waller's statement as to chloroform being dangerous under all circumstances, and only justifiable under exceptional circumstances, though he admits himself, a preference for it on account of the ease of administration with, nevertheless, an ever-increasing dread of the dangers involved.

177. **Anesthetics and the Kidneys.**—Twitchell discusses some of the evidence in regard to the effect of ether and chloroform on the kidneys, and states that he does not believe and can not find from the records that either one of these agents necessarily influences the kidneys when used as an anesthetic. He thinks that faulty administration of the drug is responsible for the edema of the lungs observed, and he thinks that the greatest mistake made is in the notion that it takes a skilled operator to administer chloroform and that anybody can use ether. The reverse is the case.

FOREIGN.

British Medical Journal, September 16.

Plague: Its Symptomatology, Pathology, Treatment and Prophylaxis. W. J. SIMPSON.—The author describes the different forms of plague: first, the pneumonic, which is one of the most fatal and dangerous on account of its not presenting the usual clinical symptoms and being liable to be mistaken for lung trouble. Pain, tenderness, and enlargement of the lymphatics are absent, and there are few signs except the severity of the case to indicate the nature of the disease. Besides being the most infectious, this is the most fatal form, and the only reliable test during life is the examination of the sputum by Haffkine's stalactite test, consisting of cultivating the microbe in broth to which drops of clarified butter or cocoa-nut-oil have been added. From the drops of oil suspended on the surface of the nutrient medium, the bacilli grow down into the depths of the liquid in the form of stalactites, which is a peculiarity not observed in any other germ under these conditions. The second form mentioned is the mild or ambulant one, which is, if anything, more likely to escape notice than the pneumonic, as it is commonly mistaken for other troubles. The symptoms are fever, pain, tenderness, enlargement of the glands, weakness, etc. It is not in itself necessarily fatal, but it leaves the patient weak and debilitated, and is likely to be followed as an epidemic by the more severe type. In some cases examination of the blood does not show the characteristic bacilli. The ordinary bubonic type is best known, and the clinical features are those usually described. The septic variety is a virulent type, in which the lymphatic glands show no special enlargement during life, but the bacilli invade the blood in large numbers and are easily detected. The chief characteristic of this form is its rapidity, the patient dying often within one, two or three days. In post-mortems nearly all the lymphatic glands are found slightly enlarged. Treatment has had but a small effect in most serious epidemics. All that has been done is to secure the best condition for the patient to make a good fight against the disease. This consists in confinement to bed, good nursing, careful feeding, and general treatment to keep up the patient's strength and prevent complication. Ice-bags to control fever, and non-depressing hypnotics, have been found useful. To sustain the action of the heart alcoholic stimulants, ammonia, strychnin and digitalis have been freely employed. The precautions are anything that can prevent the spread of the disease, thorough disinfection of everything from the patient, and in case of death a sheet soaked in strong antiseptic solution should be wrapped around the body and carbolized sawdust be put in the coffin. Nurses, doctors, friends and all exposed should be inoculated with Haffkine's prophylactic serum.

Mosquitoes in Relation to Malaria. IAN MACDONALD.—The author reports experiences with malaria in a region in Spain containing both healthy and infected sections. In the former he found only five species of culex abounding. In the latter, besides four of these, the anopheles claviger was found in all and two other species of the same genus in some. He asks: Are these facts mere coincidences?

Relationship Between Syphilis and General Paralysis of the Insane. ALFRED W. CAMPBELL.—Campbell reviews the arguments for and against the connection of syphilis and paresis, and on the whole rather favors the theory of the syphilitic origin of the latter.

Congenital General Paralysis. P. W. MacDonald and A. Davidson.—The authors report three cases, that had been accounted as congenital idiocy, in which post-mortems revealed the lesions of general paralysis. In their opinion the paresis was inherited, but they did not find syphilitic history in any of their cases.

In the discussion following these two papers above, several of the partakers did not admit syphilis as the sole cause though admitting its frequent connection with the disorder.

Lancet, September 16.

Increase of Cancer. Joseph Frank Payne.—Recognizing from statistics the apparent increase of cancer in England and Scotland, Payne discusses the question whether this is a real one or otherwise. He concludes that cancer is becoming increasingly frequent, and that there is a marked predominance of cancer of the digestive organs, with a less rapid increase of that of the generative organs. The causes of this increase are discussed in detail: 1. Heredity, which he does not consider actually proven; 2, increased longevity, which he thinks is also invalid; 3, the statistics show that with the increase of cancer there has been a decrease from tubercle. He mentions this fact but does not explain it. There has also been a decrease in deaths from infectious diseases, as shown by tables. It has been assumed by some that cancer is a disease of the well-to-do, therefore its increase is associated with increased prosperity. The poorer classes in Great Britain have been better off of late years, and have become more carnivorous, which may possibly have something to do with the fact. Another thing is the increase of alcoholism, and statistics seem to show that certain classes who are subject to special temptation in this direction rather lead in cancer statistics. He also suggests that urban life may have something to do with it, as cancer is less frequent in country districts than in towns. He is not, however, prepared to admit the importance of any of these to any great extent. The only thing positive is the increase of deaths from cancer.

British Gynecological Journal (London), August.

Treatment of Gonorrheal Salpingitis. J. W. Taylor.—After a description of cases, and general discussion of the subject, Taylor lays down the following points which he is disposed to maintain in regard to gonorrheal salpingitis: 1. A large number of women who are suffering from tubal disease have been at some time or another exposed to infection by syphilis as well as gonorrhea. These undoubtedly show marked improvement after a prolonged course of mercury and iodid, and in the course of this treatment, unless acute pyosalpinx intervenes—in which medicine is useless—it is the rule rather than the exception for all gross physical signs of the disease to slowly and permanently disappear. 2. Many cases in which there is no history of syphilis, including cases in which there is unmistakable history of gonorrhea, pure and simple, as the sole cause and starting-point of tubal disease, do similarly improve and get permanently well under the same course of treatment, provided always that the disease stops short of acute pyosalpinx and its dangerous complications. 3. Acute pyosalpinx is peculiarly liable to occur in the first place on the left side of the body and its special severity is probably due to secondary infection from the rectum. The cases of pyosalpinx, whenever possible, should be treated by free incision of the posterior vaginal fornix, by thorough exploration and emptying of all pus-cavities from the pouch of Douglas, and by iodoform gauze drainage. This is far preferable to the older operation of removal of the appendages, which is not only much more dangerous, but is peculiarly liable to be followed by fecal fistula, an operation sequel sometimes worse than death itself. 4. Such cases of mixed infection and acute suppuration, treated by operative evacuation of the pus, with or without removal of the appendages, do sometimes not only recover but remain permanently well without further treatment, the acuteness of the inflammation appearing to terminate the process of infection. In other cases, recovery is not so complete or relapses are met with, and these cases should be followed up by a course of specific treatment, the beneficial results of this being often immediately manifest when the wound tissues are unhealthy and the healing is delayed. 5. Occlusion of the tubes and peritubal adhesions consequent on gonorrheal adhesions have no direct specific causation, and must be regarded rather as secondary mechanical results of the local peritonitis which has been caused by salpingitis. Their absorption and disappearance will not, therefore, be necessarily secured by the cure of the gonorrhea, and sterility may persist although gonorrhea is entirely eradicated from the system. 6. In gonorrhea of the pelvis, there will probably remain a residuum of intractable cases, particularly cases of complication with other diseases, such as fibroids of the uterus. In these cases operative removal of the organs affected will still be required, and vaginal hysterectomy, whenever possible, with or without extirpation of the uterine appendages, is not only the most rational operation in theory, but is productive of the best final results.

Archives Int. de Laryngologie, etc., May and June.

Empyema of Sinuses in Relation to General Affections. P. Lapalle.—In 169 autopsies, empyema of one or more of the sinuses was noted in 55; sinusitis in a third, mostly men. The accompanying diseases, classified according to the frequency of the sinusitis, were: acute pulmonary affections, tuberculosis of lungs or meninges, cancer of stomach and intestines and diseases of the heart, brain and kidneys. Maxillary sinusitis was more than twice as frequent as sphenoidal, and eight times more than ethmoidal. Neither ethmoidal nor frontal sinusitis was ever found alone. Lapalle queries whether the sinusitis was the cause or the effect of the general affection or entirely independent, or whether the constant swallowing of the pus may not have created a soil of lessened resistance, with local and general intoxication of the organism, himself inclining to the latter view.

Revue de Chirurgie (Paris), September 10.

Lesions of Lateral Sinus in Traumatisms of Skull. Gangolphe and Piery.—Only eight observations could be collected for this monograph, one personal. The patient in the latter was found on the stairs, with no signs of a fracture but with the complete syndrome of apoplexy from cerebral hemorrhage, and even after several examinations intervention was not supposed to be indicated. At the autopsy the occipital was found fractured, and with it the sinus, resulting in the formation of a hundred-gram clot of blood above the dura mater. There was also a sheet effusion of "gooseberry jelly blood" over the surface of the external aspect of the hemisphere of the opposite side. Depression and compression of the convolutions by the large clot had evidently been the cause of the left hemiplegia noted, although the convolutions at the central sulcus escaped direct compression. The same cause may have induced the contractions noted in the right side, or possibly irritation from the sheet effusion. The acceleration of the pulse was accepted as evidence of the non-existence of a fracture, as Duret has announced that pulse and respiration grow slower after subdural injections. The conclusions are summarized as follows: Lesions of the lateral sinus in traumatisms of the skull may be produced by laceration from a splinter or rupture in consequence of disjunction of fractured bones. These lesions of the lateral sinus determine the production of a hemorrhage which accumulates in a clot between the dura mater and the skull, location and extent of the clot controlled by the adhesions of the dura mater on the one hand and its prehemorrhagic detachment on the other. An intra-arachnoid, semifluid sheet effusion over the opposite hemisphere frequently coincides with the hemorrhage. The symptomatology is most variable. It is far from realizing the complete picture of cerebral compression, and may simulate apoplexy from cerebral hemorrhage in every detail. Diagnosis is generally impossible, but in dubious cases, even when the traumatism and the apoplectiform ictus are the only guides, we must proceed as if assured of the existence of an intracranial sanguine effusion of traumatic origin: if the lateral sinus is exposed, extract splinters and foreign bodies and tampon the breach in the bone, and if it has not been opened by the traumatism, trephine at once, applying the trephine at the point of the traumatism, disregarding the indications furnished by the cerebral localizations, which may, as in the personal observation described, mislead the surgeon.

A Thousand and One Laparotomies. V. Sneguireff.—Our Moscow confrère has included in this summary only those laparotomies performed in his clinic and institute during the last ten years, in the presence of numerous spectators, with an autopsy of every fatal case, 98 in all, but only 58 directly im-

putable to the operation, or 5.8 per cent. Since he began using reindeer tendons for his suture material (see JOURNAL, July 8, p. 99), he has not had a single mishap in sixty laparotomies. Other points in his technic, worthy of note, are his practice of discarding his instruments during the operation and taking fresh ones from the sterilized water in which they lie ready for him; also the copious use of salt solution within and without, before, during and after the operation, to remove pus, débris and blood, as a stimulant during long operations, hence in all serious cases, also when the intestines are drawn out, also for a hemostatic, in place of subcutaneous injections, and lastly as a diagnostic measure to discover the source of a hemorrhage. He thus rinsed the abdominal cavity in 215 cases, and believes that it prevents septic peritonitis or arrests it if already developed, and is an extremely active means to reanimate the organism and enable it to support the operation better. Drainage, of course, follows. He notes the fact that the mortality was higher in one institution than the other, and suggests that in one physicians alone are spectators, while students also are admitted to the other. Regulations exclude all who have been in the dissecting-room or at a case of contagious disease, but this rule may have been sometimes evaded. He also notes a kind of periodicity in the accidents: if one has fever others are liable to follow, etc., which he is inclined to attribute to the condition of the atmosphere and of the health of the medical staff, affirming that if the surgeon is indisposed or fatigued, he ought not to undertake a difficult laparotomy, as the success depends on his faculty of tension of mind and energies. He lays particular stress on the importance of and benefits to be derived from autoplastics, as he calls his practice of covering every lacerated, denuded or exposed surface with peritoneum, thus rendering them all extraperitoneal and entirely preventing and protecting against septic peritonitis and other harmful consequences. "It transforms a complicated case into a simple one, and surgery of the cavities will have made great progress when these autoplastic procedures have been more thoroughly studied and perfected." Since he has been applying them, he has not had a case of intestinal obstruction (24 operations). Catheterization of the bladder is important to control the integrity of the organ after total hysterectomy, etc., and the simultaneous use of oxygen with the anesthetic is a valuable means to sustain the heart. Not once was a compress or instrument forgotten in the abdomen, but he confesses that once a mistake was made in the invariable preliminary count, and a second and third laparotomy were done in the search for an imaginary missing compress, resulting in fatal peritonitis. Death from the heart is more frequent among persons with a weary or worn-out nervous system. Obese women, he adds, are also poor subjects for any surgical intervention.

Structure and Function of Kidneys After Occlusion of Renal Vessels. R. ALESSANDRI.—The renal artery or vein or both, in dogs and cats, were ligated in an extensive series of experiments, with the result differing from that of previous research, that compensation may develop after ligature of the renal vein, to an extent which enables the organ to recover almost complete normal structure and function, permitting the ablation of the other kidney in about three months. The same result follows ligature of the renal artery, with the difference that in the cat the compensation is less perfect than in the dog, and zones of necrobiotic infarcts appear in the uncompensated regions. Compensation is so complete in the dog—and would probably be still more perfect in man—that the organ returns to almost normal structure as the phenomena of stasis subside. He found that ligature of both artery and vein is incompatible with the life and functioning of the epithelial portion of the kidney, but that the collateral vascular anastomoses suffice to prevent rapid necrosis of the organ, and all that occurs is a gradually progressive cirrhosis which encroaches more and more on what remains of the tubules and glomerules. Consequently, although it may be impossible to preserve even a portion of functioning renal substance after ligature of the pedicle, still, the organism is not menaced by a rapid necrosis of renal tissue. This tissue, on the contrary, is still capable of a relative life or a fibrous transformation from proliferation of the interstitial connective tissue, which does not die like the epithelial portion. (28 cuts).

Semaine Medicale (Paris), September 6 and 13.

Tridermic Tumors of Ovaries and Testicles. F. MUNCH.—The most prominent characteristic of dermoid cysts of the ovaries and testicles, distinguishing them from dermoid cysts occurring elsewhere, is that they are composed of the three layers of the embryo: the ectoderm, endoderm and mesoderm, and hence Munch suggests, as the most expressive name for them, "tridermic tumors" as more appropriate than Wilms' "rudimentary parasites" or "embryomata" for encysted tumors, and "embryoid tumors" for the solid variety. His article is a review of recent research, already summarized in the JOURNAL, pages 487 and 603. The theory of the pathogenetic origin seems to be established for the ovary, and is sustained in regard to the testicles, by Balbiani's observation of primordial ovules in the testicles of subjects under puberty, although no such parthogenetic process has been noted in male animals. The rarity of these ovules, however, is an argument against this assumption, as also Wilms' observation of a tridermic tumor originating in the seminiparous epithelium. The absolute identity of these tumors in the ovaries and in the testicles has not yet been definitely established; the presence of certain organs in the latter, the nervous system for instance, needs further confirmation.

Diagnosis of the Affection Called Pregnancy Chorea. GILLES DE LA TOURETTE.—Four years ago this author demonstrated that the so-called tetany of pregnancy was not a morbid entity as hitherto considered, but a manifestation of hysteria, and he now proves practically the same in respect to the so-called chorea of pregnancy. If the cases on record, and new observations, are studied by the light of modern science, they will be found to have nothing in common with Sydenham's chorea—which he believes, with Sydenham, has no existence after puberty—nor with that rare affection, chronic chorea, and still less will they be found to have any connection with the pregnancy. He asserts that the so-called chorea of pregnancy is merely an exacerbation of a chronic *tic convulsif* on a basis of hysteria, and study of the antecedents will always disclose the influence of heredity, spasmodic symptoms and psychic abnormalities dating from earliest childhood, possibly insomnia, somnambulism—which he considers a token of impending hysteria—facial spasms, etc., with coprolalia later. An important sign is the incoordinated, abrupt, arrhythmic and angular character of the movements, and the fact that they can be arrested by the will, for a few moments, if the patient can be induced to exert her will, recurring then with increased intensity. The pregnancy is only a factor in so far as it is unwelcome or for other reasons the psychic balance happens to be disturbed at the time. The affection has been treated by artificially terminating the pregnancy in many cases, but this will no longer occur when it is recognized as a chronic *tic convulsif* existing from early childhood, although its manifestations may not have previously attracted attention to their pathologic character.

Berliner Klinische Wochenschrift, 4.

Costal Stigma in Etiology of Enteroptosis and Nervous Dyspepsia. B. STILLER.—The downward dragging of the intestines usually occurs in youth, seldom in childhood or in later years, and is due to a congenital, generally inherited disposition, which always involves a weakness of the central and digestive nervous system and is often indicated by a slender build and pathognostically by the mobility of the tenth rib, due to a defect in its cartilaginous attachment. Comparatively slight accidental causes have a rapid and profoundly depressing influence on the nutrition and nerve power in persons with this coctal stigma, inducing the most severe dyspeptic neurasthenia. "Enteroptosis and nervous dyspepsia are identical, and the troubles in enteroptosis proceed from the primary neurasthenia." Atony of the stomach is an early symptom of enteroptotic dyspepsia, also frequently hyperacidity and constipation. The condition is encountered in men as often as in women. The costal stigma is sometimes noted in chlorotic, hysteric and phthisic subjects.

Renal Insufficiency and Curare. A. V. KORANYI.—In case of renal insufficiency, the osmotic pressure is increased by the retention of molecules, in solution, which renders the task of eliminating water more difficult for the heart and lungs. The cause of polyuria with shriveled kidney is the hyposthenuria,

that is, the inability to evacuate a highly concentrated urine with retained permeability to a certain extent for solid molecules. The aim of therapeutics is to reduce the osmotic pressure, and this is attained by restricting the albumin metabolism, best accomplished with curare, which Koranyi considers equal to the most approved diuretic and diaphoretic remedies and able to enhance their effect. Rabbits injected with curare, after removal of both kidneys show its influence in the slower lowering of the freezing point of the blood and the longer survival, in proportion to the amount of curare injected.

Centralblatt f. Chirurgie (Leipsic), September 16.

Extirpation of Lymph Glands in Inguinal Region and Along the Iliac and Obturator Vessels in One Operation. K. G. Lennander.—The incision is carried from the symphysis along Poupart's ligament to and along the edge of the iliac crest. The lower glands are first removed and then Poupart's ligament is cut loose from the tuberculum, pubic crest, fascia lata and fascia iliaca. The vasa epigastrica inf. and the vasa cir. il. int. are cut between two ligatures. The glands are extirpated as the operation proceeds. The incision is carried through the muscles close to and along the iliac crest, and the peritoneum is then easily detached from the iliac fossa and small pelvis with the vas deferens, etc. The lymph glands around the femoral ring and vasa iliaca ext. to the fork of the art. iliac comm. can then be easily removed, carrying the incision as far as necessary, and providing for ample drainage. Poupart's ligament is then replaced and sutured, also the muscle wall to the iliac crest. No motor nerve is cut, and there is no possible chance for hernia to develop from this operation, which can be divided into two sittings a week apart if desirable.

Muenchener Medicinische Wochenschrift, September 12.

Treatment of Chlorosis With Rectal Injections of Iron. O. Jollasse.—This communication announces the welcome news that in fourteen cases of chlorosis, in which gastric disturbances rendered the administration of iron *per os* impossible, three daily injections of ferrum citr.—0.1 to 0.6 to 50.0 amylum—increased the hemoglobin an average of 6 per cent. a week, which is not much below the average of 9 per cent. attained with the administration of Blaud's or Vallet's pills *per os*, and is actually higher than the 5 per cent. average after giving tr. ferr. comp. Numerous tests and experiences with various iron preparations, etc., are tabulated, and confirm the great value of iron suitably administered, and the necessity of rest in bed which, alone, will cure the headaches, etc., for the time being, but has no effect on the amount of hemoglobin. The rectal injections sometimes in certain cases cause pain in the abdomen, but it is not severe, and can be attenuated by the application of warmth.

Truss for Cardiac Asthma. E. Abee.—A bandage and pad somewhat similar to a truss but larger, is worn over the apex of the heart with the effect of relieving the symptoms in the most surprising and satisfactory manner. Among the observations described, one case of chronic nephritis, with hypertrophy and dilatation of the heart and cardiac asthma, the patient only able to creep slowly along, is so relieved by the truss that the subjective symptoms have almost entirely ceased and a half hour's walk can be taken without discomfort.

St. Petersburger Medicinische Wochenschrift, September 9.

Examination of Pelvic Organs Per Rectum. A. P. Gubarew.—Extremely accurate information can be derived from the following modification of Kelly's method, according to the writer's experience: a cylindric speculum with a stopper is introduced into the rectum, the patient in the knee-chest position. The stopper is then removed, which allows the entrance of air into the rectum. The speculum is then also removed and the patient turned on her back with the pelvis elevated. The folds in the rectal mucous membrane are smoothed out and the anterior wall of the rectum clings to the posterior wall of the uterus and the lig. latum, like a thin membrane. The position and shape of the organs, ligaments, sacral plexus, bones of the pelvis and, with a little practice, even the ureters can be palpated. The uterus can also be drawn down and the vagina explored at the same time.

Lymph Glands After Extirpation of Cancer. N. M. Wolkowitsch.—In a patient whose entire larynx was removed a couple of years ago, on account of cancer, with no recurrence to date, the lymph glands in the region of the lower jaw are very much hypertrophied, but soft. This hypertrophy is evidently compensatory, as occurs in the supraclavicular fossa after evacuation of the axilla, or over Poupart's ligament, after evacuation of a focus in the inguinal regions; "the hypertrophy of the glands under these circumstances must not be confounded with cancerous degeneration."

Mechanism of Hypertrophy of Heart. M. Michailow.—This communication states, as the results of experimental histologic research, that ligating one uterer or one of the renal arteries causes the heart to hypertrophy as in nephritis. This hypertrophy is at first induced by a chemical irritation of the heart by the altered blood, which is demonstrated by the rapid appearance of alterations in the cardiac ganglia, muscles and vessels. The nerve-cells of the ganglia multiply by mitosis and direct segmentation. The muscles also at first increase in the same way, afterward becoming hypertrophied. In the cardiac vessels neoformation of vessels could also be noted with diffuse sclerosis.

Primary Multiple Cancer. N. Petroff.—At the autopsy of a man who had succumbed to cancer cachexia, an epithelial cancer was found in the pharynx and a cylinder-celled cancer in the lesser curvature of the stomach.

Agglutination by Red Corpuscles. F. Tschistowitsch.—"The agglutinating property is not produced by the serum, but by the red corpuscles; it is yet undecided whether the phenomenon is of a purely physical character or a ferment effect."

Ectractio Cataractae Without Iridectomy. T. Ignatieff.—Iridectomy is sometimes dangerous and always superfluous in removing a cataract, except in case of easily recurring prolapsus iridis, or serious posterior synechiae preventing evacuation of the cataract and the complete collapse of the capsule after incision. "It is merely a relic of preantiseptic days."

Perforation of the Intestines by Ascarides. Kompanzeff.—At the autopsy of a soldier who had died with symptoms of perforation peritonitis, three ascarides were found in the small intestine, one of which was half through a hole in the intestinal wall.

Giornale Int. de Scienze Mediche (Naples), 8, 9 and 10.

Effect of Parathyroidectomy. Capobianco and Mazziotto.—There are four parathyroid glands in monkeys and other mammals. The blood-vessels are surrounded by spaces in which a homogeneous granular substance is found which reacts similarly to colloid substance. The vascular connection is very intimate between the thyroid and the parathyroids. Extirpation of all these parathyroids leads to the rapid death of the animal with the same or exaggerated symptoms, as after thyroidectomy, including the lowering of the temperature. Partial extirpation is not injurious if even one parathyroid is left.

Head Jerks With Aneurysm of Aorta. Bruschini and Coop.—Besides the laryngotracheal jerks observed with aneurysm of the arch of the aorta, these writers call attention to the rhythmic jerking of the head forward, and occasionally sidewise, caused by a counterjerk as the pressure of the aorta on the tracnea is felt. It is more important than the laryngotracheal pulsation, as it usually precedes the latter and is much more distinct, the intensity corresponding to the amount of adhesion of the aneurysm to the surrounding tissues. Gradual disappearance of this symptom can be regarded as a favorable sign, indicating a gradual coagulation process in the aneurysm. Its sudden disappearance may indicate the rupture of the sac.

Disinfection of the Mouth.

C. Roese announces that numerous—about 264—tests with various disinfectants for the mouth have convinced him that 50 per cent. alcohol is not only powerfully bactericidal—as others have established—but that it has a specific healing effect on the diseased mucous membrane of the mouth, producing an arterial fluxion, under the influence of which the venous stasis of the diseased gums disappears and they return gradually to normal. It is impossible to rinse the mouth effectively with it on account of the smarting of the roof and sides of the mouth, but the gums are less sensitive, and his method of applying it is to have the tooth-brush dipped in the alcohol. He urges chemists to devise some preparation for a tooth cream combined of alcohol, precipitated chalk and an appropriate antiseptic.—*Muench. Med. Woch.*, September 5.

Societies.

COMING MEETINGS.

Wyoming State Medical Society, Laramie City, October 10.
American Academy of Railway Surgeons, Omaha, Neb., October 12-13.
Vermont State Medical Society, Burlington, October 12-13.
Medical Association of Central New York, Syracuse, October 17.
Tri-State Medical Society of Alabama, Georgia and Tennessee, Chattanooga, October 24-26.
New York State Medical Association, New York City, October 24-26.
Medical Society of Virginia, Richmond, October 24-26.
American Public Health Association, Minneapolis, Minn., October 31.

Medical Society of Virginia.—This society will hold its thirtieth annual meeting in Richmond, October 24, 25 and 26. In addition to the large number of papers on the program for the various sessions, there will be clinics both at the Medical College of Virginia and the University College of Medicine on the afternoons of the 25th and 26th.

Association of Military Surgeons of U. S.—At the recent meeting of this Association, held in Kansas City, Mo., the following officers were elected: President, Col. Charles H. Alden; vice-presidents, Gen. G. H. Cook of New Hampshire, Capt. George Worth Woods of Brooklyn; secretary, Lieut.-Col. Charles Adams of Chicago; treasurer, Lieut. Herbert A. Arnold of Ardmore, Pa. The next meeting will be in New York City. These columns will contain a further report of the recent meeting, in forthcoming issues.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Abstract of Proceedings of Twelfth Annual Meeting, Held at Indianapolis, Ind., Sept. 19, 20 and 21, 1899.

(Continued from Page 862.)

FIRST DAY—AFTERNOON SESSION.

COCCYGEAL DERMOID FISTULAE.

DR. ROBERT T. MORRIS, New York City, made some remarks on this subject. It is apparently one that has not received very much attention, as he finds little reference to it in the literature. Occasionally some one has reported the finding of a dermoid cyst in the coccygeal region, but without making comments on the way in which such cysts are likely to have been formed. He has seen reference to cysts only, but on making a study of the subject he finds that surgeons are much more apt to find fistulæ than cysts. They are more apt to find depressions than fistulæ. In the region of the coccyx, not infrequently funnel-shaped depressions of the skin are found. Fistulæ are less frequent, extending to a depth of from half an inch to four inches in his deepest case; and still less frequently wholly encapsulated cysts are observed. The fistulæ and cysts contain straight hairs, mostly of the lanugo type, although he has seen some nearly three inches in length, straight, in a mass, and welded together by sebaceous material. The sebaceous material escapes from the fistulæ in large quantities; it remains encapsulated in the cysts and in the funnel-shaped depressions; it frequently dries on the surface and comes away in the form of scales mixed with epidermis. When his attention was directed to the subject, about a year ago, he was surprised at finding the proportion of cases in which he noticed these funnel-shaped depressions or fistulæ, or cysts of the coccygeal region, or dermoid cysts. It evidently represents an embryonal defect, and what this defect is he leaves the Fellows of the Association to suggest. There is a possibility that the tail of the embryo undergoing involution leaves a portion of the skin highly endowed with embryonal latent cells, and that the skin, developing more perfectly in the connective tissues about it, encapsulates, in part or in whole, this absorbing or involuting embryonal tail, so that in a coccygeal fistula we have an inverted tail. He has had four cases of coccygeal fistulæ containing masses of hairs, in his practice up to the present time.

In trying to remove them the surgeon must remove the entire cyst wall or fistula wall, because it consists so largely of embryonal tissue that recurrence takes place promptly following the operation, unless this is done. The method of treatment with nitrate of silver and with causties results only in temporary destruction of the inner layer, just as when surgeons try to destroy branchial cysts or branchial fistulæ, consequently recurrence takes place very promptly from the deeper layers of embryonal cells, the latent cells forming the structure again, so that they must be entirely removed. The author cited a case in point and exhibited microscopic slides.

HOUSE-TO-HOUSE OPERATING.

DR. EDWIN RICKETTS, Cincinnati, Ohio, read this paper. The skilled abdominal and gynecologic surgeon of to-day is a product of surgical evolution, to which no man ever gave such an impetus as the great and lamented Mr. Lawson Tait. From him we learned that the best results depend on simplicity, thoroughness, rapidity, and rigid cleanliness; that his best work was done in house-to-house operating.

The advantages are many, and, briefly, are as follows: 1. The greater ability of the general practitioner to attend to the after-treatment, assisted by a competent nurse, the telegraph, and telephone. 2. The absence of the mental dread of the patient to go into an institution, and the risk therein entailed, a condition by no means to be underestimated. 3. Iron bedsteads and improved household furniture are rapidly finding their way into country homes. 4. God's pure air, and undeniably, less liability to infection.

With reference to the use of antiseptics, it is unnecessary to mention but one fact, a quotation from Richelot, that "the elimination of all micro-organisms during the operation by antiseptics has not been attained." Consequently their use is to be condemned, and in their stead we should rely on hot water, a dry wound, and rapid operating, which means a shorter time under the anesthetic, a very important consideration.

DR. WALTER B. DORSETT, St. Louis, Mo., said that the word simplicity in surgical work carries with it a great weight. The greatest men are known by their simple way of expressing themselves; and the greatest surgeons are known by their simple way of operating. There are many points that should not be overlooked in regard to the advisability of isolating patients from house to house. In the first place, the surgeon could not maintain the same dicipline in a private house that he does in a hospital, whether there be a trained nurse or not, because the friends and relatives of patients are constantly coming in, they carry with them the bacteria, and they have a certain amount of influence over the patient. The nervous system of the patient is more or less disturbed, and he thinks the recovery in a great measure is retarded. He is willing to admit that in hospitals a great many things are done that should not be done. Cleansing the hands by different methods is entirely unnecessary. He has used bichlorid of mercury in cleansing his hands, washing them first with soap and water. He has also used carbolic acid, creolin, etc. He believes green soap, and plenty of it, and good hot water are all that is necessary.

DR. J. HENRY CARSTENS regretted that the paper had been read, because he believes that its teachings are wrong and vicious. A great many general practitioners, after reading the paper, would laugh at aseptic surgery, as well as antiseptic surgery, and they would say there is no use in trying to practice it. When it comes to operating he believes patients do far better in a hospital than at their private homes. A cervix operation or a perineal operation might be done at a private home, but when it comes to doing major operations he believes it is far better to have patients in a hospital, where the surgeon has all the facilities for operating, etc. His success would be greater, and his mortality lower. He deprecates belittling aseptic precautions, and emphatically protested against it, because it would have a demoralizing effect on the whole profession.

DR. WILLIAM H. HUMISTON thought that if Dr. Ricketts was taken seriously it would be a backward step of fifteen years. He could not believe that the essayist was serious in all the points he had made. Any one who has seen Tait operate knows that he was the perfection of cleanliness. Bantock was likewise one of the cleanest operators. Personally he prefers to operate in a hospital, because there is less annoyance to the patient as compared with a private home.

DR. WILLIS G. MCDONALD, Albany, N. Y., said it was very disagreeable for him to disagree with his friend, the essayist. If our present system of operative surgery is correct, if it is based on the destruction, or better, the evidence of micro-organisms, then the most painstaking technic which can be de-

vised should be followed. He would not dispute the fact that the essayist could operate in almost any private house, but there was no likelihood of his having sterilized water to use about his patient, or about his hands, in any part of the building. In the State of New York people were beginning to appreciate what a good hospital really means; they appreciate what a good training-school for nurses means; they appreciate that they can be made much more comfortable and the chances of recovery are immeasurably increased by going to hospitals instead of remaining at their homes to be operated on.

Dr. Rufus B. Hall said he would defend the essayist if he had confined his remarks to emergency surgery, because he believes a certain amount of emergency surgery must and ought to be done in private houses, in a boarding-house, in a hotel, or any place the patient happens to be. He concurs in the remarks of Dr. Carstens that it is wrong for the patient and for the profession to have it go out from the Association that its members indorsed the sentiments expressed in the paper. Emergency cases, such as ectopic pregnancy, appendicitis with suppuration, gunshot wounds, and stab wounds, etc., must necessarily be treated or dealt with surgically at their homes, but to choose to go into the country log-house or frame-house and do these operations as a matter of choice, is a great mistake. The principal reason for refusing to do such operations in country homes is the increased mortality. The care of the patient and great anxiety of the operator are enough to deter one from doing house-to-house operating.

Dr. John Milton Duff stated that the Association occupied a prominent position in the medical profession of America, and its dictum goes out all over the country, and he would be sorry indeed to have it go out that the members favor house-to-house operating, believing that the lazy and ignorant members of the profession would have an excuse for not doing their full duty in antisepsis and asepsis.

Dr. Robert T. Morris said the matter had to be settled by statistics. The only ones which he had in mind were that he had lost eleven appendicitis patients, two in hospital, and nine in house operations. The operations done in hospitals were certainly more than five times those done at private homes.

Dr. James F. Baldwin differed with the essayist regarding the statistics of Dunlap, mentioned in the paper. The mortality-rate of Dunlap's cases was not 15 per cent., as mentioned by the essayist, but fully three times 15 per cent. The speaker knew this from a conversation he had had with Dr. Dunlap some years before his death.

Dr. Ricketts, in closing the debate, said that the fuss and feathers of surgery had to go, and so far as taking care of patients is concerned, they could be taken care of in their own homes by house-to-house operating equally as well as in hospitals, as there was no risk of room-to-room infection, the same as in a hospital. The only case of erysipelas he ever had was encountered in his own hospital. He had never met with such a case in house-to-house operating. Finally, he believes that the pendulum which has swung far out will swing back to the center of common sense and cleanliness in less than ten years from now.

PRIMARY SCLEROSIS OF THE OVARIES.

Dr. William H. Humiston, Cleveland, Ohio, read a paper on this topic. He said that there are two distinct pathologic conditions now classed as sclerosis of the ovaries, and universally believed to be due to inflammatory changes. There is a primary or non-inflammatory sclerosis, and a secondary or inflammatory fibrosis. These forms can be recognized both clinically and by microscopic examination. In the secondary degenerations is found—in a section taken from some portion of the ovary—a small round-celled infiltration, or the connective tissue elements in some of their various stages of development. Also, however advanced the stage of fibrosis may be, the numerical relation of nuclear to cellular elements in this variety is always greater than in the primary form. The microscopic appearances of the vascular system are also different. In the inflammatory group there is primarily a dilatation of the vessels with secondary contractions of their greatly thickened walls and a lessening of their lumen. In the primary group there is usually no thickening of the vessel walls; there is never any dilatation, and contraction occurs so early that one immediately notes the poor blood-supply, particularly to the periphery of the organ. In those cases of arteriosclerosis of the vessels, within the broad ligament is usually found the condition extending to the vessels entering the ovary, not otherwise. Lastly, in the primary group the epithelial cells of the ovarian stroma are diminished in number and usually in size. In some sections they are hard to distinguish from the connective tissue elements, and appear to be undergoing a process of reversion. These several microscopic differences are constant and decidedly marked.

The diagnosis should be based on the result of palpation of the diseased organs. The cirrhotic ovary is smaller than the normal, is hard and inelastic, and usually deeply corrugated. A sclerocystic ovary is usually larger than the normal organ, and is distinctly globular rather than ovoid. The tunica albuginea is always greatly thickened and is firm and unyielding. The size of the organ is due to the enlarged follicles just beneath the tunica. The hilum first shows the corrugations.

Summarizing the history and points for differential diagnosis, he says that the condition is non-inflammatory and without a history of infection and without signs of peritonitis. It occurs in early life, from puberty to thirty, with dysmenorrhea often since the first catamenia. Amenorrhea or delayed menstrual flow and intermenstrual dysmenorrheic pain, described by every patient as being alike in character and severity, with the pains experienced during each catamenia, are constant. This latter symptom differentiates the origin of the dysmenorrhea, making it clearly ovarian rather than uterine in its causation, and in itself is of chief importance clinically.

In not a few cases there is evidence of granular and contracted kidney. In a large percentage of cases, a marked sclerosis of the walls of some one or more arteries can be demonstrated. The ovaries, one or both, are always within reach of the examining finger, and its condition as to size, shape and consistency can be determined.

Neurasthenia develops early in these cases, but is often superseded by one of the various neuroses.

INTESTINAL ADHESIONS IN SUPPURATIVE PELVIC DISEASE; THEIR SIGNIFICANCE AFTER VAGINAL HYSTERO-SALPINGO-OÖPHORECTOMY.

Dr. F. Blume, Pittsburg, Pa., read a paper with this title, with report of a case of ileus. The author stated that the time has passed when a surgeon can say, without jeopardizing his reputation, that he operates exclusively by the abdominal or the vaginal route. Since the introduction of vaginal hysterectomy, and the revival of vaginal incision and drainage, our views regarding the treatment of suppurative pelvic diseases have undergone remarkable modifications. We have learned to appreciate the value of the differential diagnosis between the various forms and stages of the disease. We realize that there is no longer but one method of surgical treatment and that, in order to do justice to the patient, we must select that method best adapted to the case. He has seen many women, who, after abdominal section for pelvic suppuration, performed in this country and abroad, were invalids, and he has done secondary operations on a number of them. He has not, however, been called on to treat a woman on whom vaginal hysterectomy was performed by another surgeon, nor have any of his patients required or sought treatment at the hands of other operators. His experience is in accordance with the observations of other writers and justifies the assertion that the results of vaginal hystero-salpingo-oöphorectomy in suppurative pelvic disease are excellent, notwithstanding the suprapelvic complications, and there is no class of cases which, as a whole, gives more satisfaction.

The author's first case of intestinal obstruction occurred in a series of forty-two vaginal hysterectomies, and was reported last year. Since then he has done nine vaginal hystero-salpingo-oöphorectomies for pelvic suppuration, and has had another case of ileus, the history of which he gave in detail.

Dr. J. Henry Carstens said that for septic tubal diseases the vaginal operation is, as a rule, the easiest and simplest. Provided there are no complications above the pelvis, the vaginal route is to be preferred to the abdominal.

Dr. Edward J. Ill, Newark, N. J., said there always will remain those cases with which surgeons must deal suprapubically. No one route should be adopted to the exclusion of the other. In some cases it takes very close discrimination to differentiate the route to adopt.

DR. W. E. B. DAVIS said that the question hinges largely on whether the uterus shall be preserved or not. The French surgeons concede it is the best thing to remove the uterus, and if this be accepted in cases where the appendages are to be removed, then the vaginal operation has a much wider field; but if the uterus is to be preserved, then the abdominal route should be the rule, and the vaginal the exception. Unquestionably, in cases of puerperal abscesses, not gonorrheal, but where the abscess is peritubal, the vaginal route furnishes a great field for the proper treatment of such cases.

DR. JOHN M. DUFF cited cases as an argument in favor of leaving the uterus. He also mentioned cases which called for its removal.

DR. WILLIS G. MACDONALD stated that there were a number of surgeons who were coming to the belief that not all of the good surgery that has ever been done on pus-tubes and collections of pus within the pelvis has been accomplished through abdominal incision. Many surgeons who are doing a fair amount of surgical work are becoming more and more convinced that they can do good surgery and effect cures through the vagina.

DR. BLUME, in closing, thought it was a serious matter for any surgeon to adhere to one route at the present time. The only way to reduce the mortality of the abdominal operation is to differentiate between the various forms and stages of the disease.

FIRST DAY—EVENING SESSION.

This session was devoted to the exhibition of pathologic specimens, of which the operators gave brief histories, and short discussions followed.

SECOND DAY—MORNING SESSION.

SHALL WE ABANDON VENTROFIXATION OF THE UTERUS?

DR. WALTER B. DORSETT, St. Louis, Mo., read a paper with this title. The question asked implies that some doubt exists as to the propriety of the operation of fixing or suspending the uterus to the abdominal wall. The object of the paper was not to discuss the different methods of corrections of displacements of the uterus, nor the results or accidents that are liable to and occasionally follow them; but to draw attention to one method which, on account of the unfortunate results that have now and then followed it, has been, to a certain extent, abandoned by some operators, viz., that of ventrofixation. By this, as practiced by himself, he does not mean ventrosuspension as originated and practiced by Kelly and others. His experience has not been followed by the results reported by others who have worked along the same lines; on the contrary, it has been highly satisfactory. Up to four weeks ago he had made thirty-eight ventrofixations, and up to this time has had no failures of keeping the uterus in its proper place: 4 have borne children without any of the usual troubles reported in pregnancy or during the delivery of the child, and none have had entanglements of the bowels or omentum. Of these 8 were done to correct different degrees of prolapsus, and the remainder were for retroflexions and retroversions; 15 of the latter were complicated with ruptures of the perineum and cervix, which were previously repaired by himself or others before the final operation was done; 16 were married women of the child-bearing age, and between the ages of 23 and 39 years; 12 were in cases of marked disease of the adnexæ, 5 of double pyosalpinx and abscess of one or both ovaries, and 2 of disease of one tube and one ovary; 6 were in marked neurasthenic women in whom there was a pronounced relaxed condition of the entire muscular system, predisposing the individual toward retrodeviation.

Dr. Dorsett then described at length the technic of the operation, his remarks being illustrated by blackboard sketches and diagrams.

VENTROFIXATION FOLLOWED BY DELIVERY AT TERM

DR. X. O. WERDER, Pittsburg, Pa., reported five cases of firm ventrofixation followed by delivery at term. In two cases dystocia followed this operation done for complete prolapse of the uterus with inversion of the vagina. One case terminated spontaneously, the other required Cesarean section. The former case had been operated on by him, the latter by another surgeon. In both cases a series of operations was done at one sitting, including curettement, amputation of the cervix, anterior colporrhaphy, ventrofixation and perineorrhaphy. In his own case very firm fixation of the fundus and posterior wall of the uterus to the abdominal wall was made in order to be sure of relieving prolapse. In the other case infection is said to have been the cause of broad attachment and firm fixation.

He excludes from discussion other procedures intended to hold the uterus in anterior position and defines the limits of ventrofixation as follows; It is the operation of preference in cases of complete prolapse of the pelvic organs, and in cases in which a very large heavy uterus, due to chronic metritis, is habitually retroverted or retroflexed and causes pronounced symptoms. In these cases he thinks less rigid fixation is ineffective. The fixation should be between the anterior uterine wall, not the fundus or posterior wall, and lower angle of wound.

He attributes the serious after-results to errors in technic rather than to the procedure itself.

A SIMPLE, EFFECTIVE, AND ESTHETIC OPERATION FOR SHORTENING THE ROUND LIGAMENTS.

DR. H. W. LONGYEAR, Detroit, Mich., presented this paper, in which he described and commended an operation which he believes to be the best method which has been placed before the profession. The method was first brought to his attention by Dr. J. H. Kellogg, in 1897. Soon after this, appreciating the correctness of its theory, he attempted it himself, but did not succeed in finding the ligament according to Kellogg's directions, until he had seen him perform the operation. After the preparation of the patient, which should be first shaving the pubes, and otherwise in every particular as for an abdominal section, the operation in brief consists of the following steps:

"1. The incision: This is made about an inch in length, somewhat shorter in thin subjects, parallel with and just above Poupart's ligament, and with its outer end about half an inch inside of the internal ring. It should pass through skin, superficial fascia and fat, down to, but not including, the loose tissue which overlies the tendon of the external oblique. An incision of this length and situated as directed will be practically bloodless. If begun too far back, a branch of the superficial epigastric artery may be severed, and if too far forward, a branch of the superficial external pudic artery will be encountered, while if carried beyond the layer of fat, veins will be cut which will cause the field of operation to be more or less obscured. The location of the internal ring is determined by the pulsation of the femoral artery which passes just under it. (Dr. Kellogg locates it by measurement.)

"2. The separation of the wound transversely by the use of eye retractors mounted on long handles.

"3. Clearing away the loose tissue overlying the tendon of the external oblique by pulling it from side to side, longitudinally with the wound, with blunt hooks, and catching with the retractors each successive layer as it is raised up by the hooks. The blood-vessels in this tissue are thus pulled back and held out of the field of operation. With the retractors holding back the tissues a field of about one inch square in size is presented, with the smooth white glistening aponeurosis forming the tendon of the external oblique, at the bottom. Its oblique fibers can be usually easily traced to their junction with Poupart's ligament. By moving the retractors in various directions, being careful at the same time to keep the tissues within their grasp, a much wider field may be inspected, if necessary.

"4. Puncture, one-quarter of an inch in length, of the tendon of the external oblique, with the scalpel, at a point just above Poupart's ligament, and at the outer aspect of the cleared space.

"5. Insertion of the blunt hook, which should be passed downward close to the floor of the inguinal canal, then inward and upward, and the ligament with its surrounding investment of fat will be brought up out through the opening in the tendon.

"6. Isolation and pulling out of the ligament, which is facilitated by stripping back the adipose and cellular tissue with blunt-pointed forceps as it emerges through the opening, and, if necessary, cutting with scissors any tendinous attachments which impede its freedom. Care should be observed during this maneuver not to cut the cuff-like prolongation of peritoneum which forms the canal of Nuck, and which is usually dragged from the internal ring, and makes its appearance as the ligament nears the uterus. If the ligament still comes out

easily, its attachment can be carefully snipped with the scissors and the cuff rolled back.

"7. Anchoring the ligament: This is done by Dr. Kellogg by means of silkworm gut sutures which are passed from the skin surface, and which also serve to close the wound, although he also uses superficial catgut sutures for the latter purpose. I use one buried kangaroo tendon suture for fastening the ligament; otherwise I follow the directions of Kellogg. The loop of ligament, which will be from two to four inches in length, is held up by the assistant while its proximal portion, as it emerges through the opening in the tendon, is made fast to this structure by the suture, which is passed first through aponeurosis, then the ligament, so as to grasp about two-thirds of it, and then the aponeurosis on the opposite side, and left untied. An aneurysm needle is now passed in and out through the aponeurosis of the inner aspect of the wound, and through these two openings the loop of ligament is drawn by means of a heavy silk thread, turned backward upon itself and made fast to the aponeurosis and ligament by passing the loose suture through both sections and tying. The one strand of kangaroo tendon is thus made to pass through the ligament three times and fasten the bunch together to the aponeurosis, in which position nature will soon make permanent fixation.

"8. Closure of the wound: This I do with fine catgut, using the button-hole stitch, after which the wound is sealed with iodoform collodion, reinforced with a layer of gauze, which is saturated with the collodion, thus making a firm and impervious seal. Before using the collodion, the surface of the skin where it is to be applied should be bathed with sulphuric ether, which removes any oily material, and thus insures the firm adhesion of the seal. A thick pad of gauze and a T-bandage complete the dressing. The seal is removed after the tenth day, and as it is stripped off, the catgut sutures, which by this time are absorbed beneath the surface, come away with it. The time required by this method of operating is very much less than by the Alexander method."

Previous to operation a suitable pessary should be fitted for holding the uterus in anteversion during the operation, and this should be left in position, with occasional inspection, for three months afterward.

During the last eight months, Dr. Longyear has performed the operation on fifteen patients, and the results up to date have convinced him that this operation has come to stay, as it has the points of merit designated in the title of the paper.

(To be continued.)

San Francisco County Medical Society.

September Meeting.

HOME TREATMENT OF CONSUMPTION.

Dr. Albert Abrams, in his paper on this topic, discussed the present attitude toward infectious diseases, and especially tuberculosis. He believes that the tendency to accept the bacillus tuberculosis as the one and only etiologic factor in the causation of consumption correct. The value which the lowered resisting power of the individual plays in the problem is not generally sufficiently recognized. The disease is not due to the toxins of the germ, but is a systemic affection. The bacillus tuberculosis may be considered as a mere accident. As a general statement, it can be truthfully said that those patients who have been improved by some antitoxin treatment could have been cured by a proper and thoroughly carried out hygienic one; and those who have been cured by the antitoxin treatment would have been cured in much less time by the simple hygienic method. The custom of looking on tuberculosis as an incurable infectious disease is, in his opinion, wrong. As autopsies show that 59 per cent. of the people who come to the post-mortem table have had tuberculosis, it may safely be considered as the most curable of all the chronic infectious diseases. The habits, surroundings and diet are the all-important features; and especially the habit of proper respiration. This is almost always neglected. Confinement is also an unwise measure, for these patients need and require fresh air all the time, and the fresh air that can be secured only by their being and living out of doors. Climate, he considers of little or no importance: pure air, plenty of it, sunshine and a moderate temperature are the essentials. The habits of the patient should be carefully supervised, to the most minute detail, and particularly the respiration: these patients generally have very poor respiration, and generally but little attention seems to be given to that question. They should be taught to take deep inspirations, and then to forcibly expel the air from the lungs. Later they should be taught to inhale deeply and hold the breath. Practice will teach them to do this for as long as two minutes at a time. The holding of the breath, in Dr. Abrams' opinion, is very valuable, for the air in the lungs, heated by the body, expands and thus forces the small air-spaces to distend. If the patient is examined with the fluorescent screen while breathing and exercising, it will be noticed that no exercise so fully dilates and distends the lungs as does deep respiration with forcible expiration.

The finding of bacilli in the sputum, so far from being the sign of an early stage of the disease, is a late sign, in his opinion. Consumption should be regarded as a systemic and not as a local disease; the lungs are but the stage for the exhibition of one factor in the equation. As an aid in the dilatation of the lungs and the air cavities, the pneumatic cabinet is most excellent; 21 per cent. of all cases can be rapidly and satisfactorily benefited in the matter of respiration, by the use of it. He also thinks that the ultra-violet rays of the solar spectrum have a great penetrative power and may enter the tissues and prove dangerous to the life and increase of the tubercle bacillus. Therefore, sunlight is essential to the proper treatment of these cases. He cited the reports of one of the Pennsylvania penitentiaries, in which, for fifty years, the death-rate from tuberculosis was 50 per cent.—this when the prisoners were confined to their cells with no exercise and but little sunlight, though the system of ventilation was good, and careful examinations of the air introduced and withdrawn from the cells showed it to be good and pure. Later, when the cell windows were enlarged, and when exercise was permitted and all invalids and ailing were given exercise in the sun for a time each day, the death-rate from tuberculosis, for ten years, dropped to less than one-half what it formerly had been.

The patients should be well fed, if anything overfed, though the stomach and the bowels need careful attention. At first the patient should be placed in bed, preferably in a tent in the open air, and treated on the rest cure principle; plenty of feeding and sufficient exercise by means of electricity and massage. After from four to six weeks of this treatment, and when the weight has increased, the patient should be allowed to get up, to have some variation in the diet, and to take a moderate amount of exercise, in the shape of walking, daily. No exercise to the point of fatigue should be permitted. Sanatoria are good, but only for the reason that they provide a place where the buildings, etc., are properly constructed, and all arrangements may be carefully and conveniently overlooked. A good trained nurse and good control of the patient at home will be found to be quite as efficacious and more satisfactory to the patient than isolation at a sanatorium. The possibility of infection at sanatoria is quite out of the question. The records and statistics of the German sanatoria, which have been carefully kept for many years, show that the death-rate is decreasing rather than increasing. He recommends the building of a tent in an open yard where there is plenty of air and sunshine. The floor should be boarded and the tent so built as to allow free circulation of air without draughts. A bed and other necessary furniture should be provided. A good trained nurse is essential. He has treated 18 patients in this manner during the past two years, with the following result: Of 10 in the first stage, 7 were cured and 3 improved; of 7 in the second stage, 2 were cured, 1 died, 1 slightly improved and 1 remained stationary; of 3 in the third stage, 1 cured, 1 died and 1 improved. The number of patients treated is too small to permit of drawing any extensive conclusions, except that it shows that a general beneficial result will follow when strictly hygienic measures are pursued and the patient given liberal quantities of fresh air and sunshine.

Dr. John C. Spencer highly commended the method of treatment advocated, for the reason that it promised such good results and would not necessitate the patient's leaving home and friends for a strange place. He believes the question of climate one to be considered when possible. The benefit and

delight of sleeping out of doors, in a tent, can only be appreciated by one who has tried it.

DR. LEO NEWMARK said that he had been impressed by the fact that in this age, when every effort seems to be directed toward the ardent search for specifics in the treatment of disease, and when so many specifics for tuberculosis have been advanced and advocated, not one of these had been mentioned in Dr. Abrams' paper. He wished to inquire whether Dr. Abrams thought them of so little value and importance that they could be quite ignored?

DR. PHILIP KING BROWN said that the treatment as advocated was an excellent method to contrast with the treatment by specifics. Recently reports have been made by several men, some of whom have employed specifics, and others who have followed the open-air and hygienic plan; the simple hygienic method of treatment certainly showed a greater number of cured and improved patients than did the treatment by any specific yet advanced.

DR. ABRAMS, in reply to Dr. Newmark, said that he had purposely omitted the mention of any specific as a remedial agent, for after trying them all he had quite come to the conclusion that they were practically useless, and that simply looking after the regimen with minute care was the only method of value.

LIGATURES AND SUTURES.

DR. Z. TAYLOR MALABY read this paper, and presented the case of the absorbable vs. the permanent ligature, and read reports from many of the prominent surgeons of this country as to their opinions and preferences in the matter of ligatures and ligature material. Many cases were mentioned in which death could be traced to the presence of a permanent suture. Kelly reported three deaths in which this factor could be assigned as the direct cause. He also mentioned the case of a man who had been operated on seven times in order to locate and remove from the abdomen a nonabsorbable ligature which had produced a sinus. All efforts had been unsuccessful. Silk, silkworm gut, silver wire and catgut, as materials for sutures and ligatures, were all discussed at some length. Methods of sterilization were reviewed and their relative advantages mentioned. The possible value of making an antiseptic suture, as recently advocated by Senn and others, seems to promise well. Catgut prepared by the silver lactate method was exhibited and the method of preparation described. It is not difficult to prepare the gut by this method, and it seems to have some positive antiseptic properties, as it is possible that infection may be carried into the tissues with the suture, which in itself may be sterile.

BOTTINI PROSTATIC INCISOR.

DR. JOHN C. SPENCER demonstrated this incisor and the Valentine urethroscope. He first referred to the old prostate incisor, or cautery knife, and then to the improved pattern which is now being more extensively used. The bladder and rectum should be evacuated; the bladder should be washed and then a 4 per cent. eucain solution introduced. It should not be forgotten to fill the bladder with boric acid solution immediately before commencing the operation. If this is not done there is danger of injuring the bladder. The finger in the rectum, on which the beak of the instrument touches, acts as a guide. A stream of water is sent through the side blades of the instrument, thus cooling it and removing the possibility of cauterizing too much tissue. Four cuts should be made. The operation is still *subjudice*, but it seems to offer fair promise of satisfactory results in a goodly number of cases. Willy Meyer, New York City, has had some experience with the improved instrument and finds it satisfactory. In regard to the Valentine urethroscope, the instrument is certainly convenient. It is a great improvement on the original type of urethroscope, the hot wire of the older type being replaced with an incandescent electric lamp, and the water-cooling device done away with. The light can be left in the urethra for some time, without any discomfort to the patient. It is provided with a sort of telescope by means of which the illuminated field is more readily seen. It is operated by four dry cells, and is thus made readily portable.

DR. J. HENRY BARBAT considers it a mistake to fill the bladder with boric acid or any other solution; the bladder should be filled with air. If filled with any watery solution, the danger of producing steam from the hot knife coming in contact with the water is considerable; if air be used, this danger is entirely avoided.

DR. F. BENNY CARPENTER referred to the difficulty of illuminating any of the cavities of the body, owing to the fact that most forms of illuminating apparatus provided for that purpose do not secure parallel rays of light, and hence the illumination is not good. He recently installed an apparatus in which the light was entirely outside of the cavity and was directed into the canal of the region to be examined, by means of a right-angled prism. In this way parallel rays of light may be obtained and the field more satisfactorily illuminated.

DR. SPENCER said that it could not be possible, in skilled hands, to form steam by contact of the solution with the hot knife.

SYRINGOMYELIA.

DR. LEO NEWMARK exhibited the spinal cord of a woman who in life had presented a very interesting condition of this affection. Eight or nine years ago he had first seen the woman, and had then written up her case quite fully. She was much impressed with the literary fame thus acquired, and shortly before her death instructed her attending physician to inform Dr. Newmark and allow him to perform a post-mortem examination. This was done and the cord obtained.

The woman was 25 years old, and had lived in California since her second year. Six or seven years before seen, she had noticed a prickling sensation in the right deltoid, "like when the foot is asleep." This sensation gradually extended down the right arm to the wrist; it has never been present in the left side. Vigorous blows on the fleshy part of the arm gave relief. She was a seamstress and unmarried, and continued her occupation, the peculiar symptoms persisting for a year or two. While ironing she often sustained injuries to her hands which, while severe, caused her no pain. In this way her attention was directed to the loss of the sensation of heat. Her fingers became very sore, and some of the nails fell off. A large running sore formed in the palm of her left hand, through a physician allowing the constant current with which he was treating her to become too strong. This caused her no pain. The hands later began to waste, the right becoming affected before the left. Violent jerking of the left lower limb, consisting of flexion of the thigh and extension of the knee, has much annoyed her of late; this most frequently occurs during sleep. The tactile, muscular and stereognostic senses are preserved in all parts. Very strong induced currents, applied with a small electrode, gave no pain, when the muscles of the arms were thus tested. Analgesia is more pronounced in the left superior extremity than in the right. It is most profound on the left side of the head, neck and shoulder. Temperature sensations are more marked on the right than on the left side. Trophic changes are not pronounced except for the muscular atrophy. Vasomotor disturbances are not marked. The iris reflex is normal. The left conjunctival reflex is absent; the pharyngeal reflex is preserved; the knee-jerks are present and are much exaggerated on the two sides. Hearing, taste and smell are normal. The spinal column is not tender to pressure; there is no scoliosis.

Exhibition of iron caused the general health to improve, and the pain in the back of the neck disappeared. In the discussion of a case presented before the Neurological Society of New York, Dr. L. C. Gray, said: "The only way to make a diagnosis of syringomyelia is to make an autopsy." In this case, as in numerous others, the diagnosis made during life has been confirmed at autopsy. The process of gliosis in the present case was quite advanced and the cavity in the cord was extremely large.

Chicago Medical Society.

Sept. 27, 1899.

FIBROID OF THE UTERUS.

DR. A. J. OCHSNER reported a case of fibroid tumor of the uterus, and exhibited a specimen. The patient was 39 years of age, colored. Her previous health had been good. In attempting to make a digital examination, the vagina was found occluded. On making an abdominal section, dark-colored fluid was found in the peritoneal cavity. The omentum, ovaries and tubes were adherent, and a condition found not unlike

that encountered in a patient suffering from ruptured tubal pregnancy with slight extravasation of blood. The fibroid tumor had given rise to hemorrhages from the vagina. The operation simply consisted in removing the specimen and opening the occlusion in the vagina, and performing a plastic operation.

ANKYLOSED PATELLA.

Dr. A. B. Hosmer narrated an interesting case of extirpation of ankylosed patella, in which function was restored to the quadriceps femoris. Three operations were done at different times. Operations have not been done very frequently with a view to restoring the function of the quadriceps femoris, simply because it is not often that the surgeon runs across a suitable case. The result in this case was quite satisfactory and much preferable to an ankylosed knee.

LARYNGEAL TUMOR.

Dr. O. T. Freer presented a case of this affection, in which he dwelt at length on points in the differential diagnosis.

ARTHRITIS OF THE SPINE.

Dr. Archibald Church reported a very interesting case of multiple arthritis of the spine. He stated that the subject of arthritis deformans in association with the joints of the spine had been considerably neglected, both in books on orthopedics and general surgery. He mentioned several cases reported and described by Bradford as spinal rheumatism. Another observer, a Russian, in 1893, had reported cases which he designated as spinal stiffness.

PROGRESSIVE MUSCULAR DYSTROPHY.

Dr. Bertram W. Sippy exhibited a case of progressive muscular dystrophy of the Erb type. The patient was a German, 31 years of age, a tailor by occupation, and single. When he was 16 years of age he noticed weakness in the right arm and difficulty in raising it. At the age of 18 a similar condition developed in the left arm, and at 20 or 22 the right arm and shoulder became extremely wasted. He dwelt on points in the differential diagnosis of the muscular dystrophies.

Dr. L. L. McArthur exhibited a patient on whom he had operated for acute fat necrosis.

Dr. F. C. Hotz showed a case of symblepharon which was relieved by plastic operations.

Dr. E. Fletcher Ingals followed with the report of an interesting case of aneurysm of the aorta.

Dr. Arthur Dean Bevan described, at considerable length, an operation for old dislocation of the elbow-joint.

Cincinnati Academy of Medicine.

Sept. 18, 1899.

EPITHELIOMA.

Dr. Albert Freiberg presented a patient from whom he had removed an epithelioma of the left ala nasi. After removal he had, moreover, a flap of skin from the cheek completely covering the raw surface. Union had taken place readily, so that at the time of presentation, but a small scar remained to mark the location of the former tumor.

REPORT OF TWO CASES OF INTESTINAL OBSTRUCTION.

Dr. Charles M. Paul presented this report:

One case was that of a man of 57, who had had right inguinal hernia since the Civil War, and which has never been reduced. During August last, he suddenly showed all symptoms of obstruction of the bowel. After forty-eight hours, consent was given for operation. A Littré hernia was found and, the gut being in an apparently healthy condition it was relieved of constriction at Gimbernat's ligament and returned to the abdomen. The symptoms promptly disappeared. In about forty-eight hours signs of obstruction again developed. Under Schleich's local anesthesia method the abdomen was opened above Poupart's ligament and the following condition found: the pinched portion of gut had sloughed beneath the peritoneum; in this weakened area gas and feces had accumulated and distended the peritoneum into a large bag the sides of which had adhered to portions of the gut above and below in such a manner as to "elbow" the intestine so much that slight inflammatory swelling was sufficient to again obstruct the lumen. The patient succumbed about five hours after the operation.

The second patient was a male of about 60 years, who gave a clear, definite history of a slowly progressing obstruction of the bowel, covering a period of at least fifteen years previous to the last attack. The attacks were accompanied by all the signs of obstruction, fecal vomiting being present in a large number of them. They had always been relieved by active catharsis, rest in bed, and liquid diet. For the reason that the attacks had always ended favorably, he refused any operative procedure in the last attack, and suffered for two weeks before giving his consent. During this time he had almost incessant fecal and ordinary vomiting, was unable to take food, and so rapidly declined. Distension was so great that, even under an anesthetic, nothing could be determined as to the location of the trouble. So a median incision was made and the lesion found at the head of the colon and involving the ileocecal valve. The valve was involved in annular form and so obstructed as to admit of only the point of a small probe. The posterior cecum and nearest glands were also involved. A Murphy-button lateral anastomosis was made between the small and large intestine, about two inches above the valve. The growth was left *in situ*, on account of the patient's condition and the impossibility of complete eradication. Exitus followed in about twelve hours.

Sept. 25, 1899.

CASE OF EXOPHTHALMOS.

Dr. S. C. Ayres presented a patient, who had received, some time previously, a severe blow on the forehead, toward the right side. Orbital cellulitis had supervened in the right eye, and when this had finally disappeared, the eye-ball was found in the condition here shown: the ball retracted and fixed almost completely, very slight motion being allowed in the several directions. The retraction of the ball gave the eye very much the appearance of an artificial eye, and to all intents this was almost a counterpart to a similar case described by de Schweinnitz. The underlying pathologic condition was inflammation of the orbital tissue, possibly as a sequence of fracture of the orbital plate of the frontal, wasting of the orbital fat, new formed connective tissue, the cicatricial contraction of the same, and the involvement of the muscles to a greater or less extent by scar tissue, thus wholly or partially restricting their movements. Apparent paralysis—muscular—and retraction of the ball naturally followed. At the time of injury, slight subluxation of the lens had occurred. The eye was very amblyopic, the vision being 15/200. The Doctor presented the case both on account of its rarity, and because the patient represented so perfect a type of this affection. Photographs of his own as well as Dr. de Schweinitz's case were presented.

SYPHILIS VEGETANS.

Dr. Ed. Shields presented a patient almost cured, the eruption formerly involving the right ala nasi and the contiguous upper lip. The infection had occurred four years previously, and when the patient had first presented himself, small warty vegetations were seen.

ECTOPIC GESTATION.

Dr. Speidel reported a case of ectopic gestation in a woman 32 years of age, the mother of three children, the youngest 8 years old. Five years ago she had had intense pain in the right iliac region, and after a short illness had discharged a large quantity of foul-smelling pus per vaginam. Three years ago she had had a similar attack. The last, a few months ago, had been accompanied by the usual iliac pain. Uterine hemorrhage was also present. On examination a firm mass was found in the pelvis, behind the uterus, and somewhat to the right, pushing the uterus upward and in the opposite direction. The diagnosis of ectopic gestation was easily made in this case, from the history and attending signs, and the rupture was thought to be entirely intraligamentous. A blood count had helped greatly in diagnosing from abscess. The operation was made per vaginam, and was entirely successful. The fetus was shown.

Dr. Gustave Zinke, in discussing the case, had occasion to report a case of his own. A woman, 22 years of age, 2½ months pregnant, was frequently seized with severe pains in the right iliac region, which pains had always been followed by diarrhea, so that her attending physician was convinced that the pains were due to intestinal catarrh and treated his patient accordingly, but without much success. While the attending physician was on his vacation, he had been called in on account of one of the attacks, and on examining the woman, had found a tumor about the size of a goose-egg on the right side,

and had advised removal. No diagnosis was made until the abdomen was opened, when a tubal pregnancy was found. Considerable adhesion had taken place between the mass and the omentum, and it was found necessary to tie off a large portion of the omentum before getting at the tumor. The latter was then easily removed, and without any interruption to the normal pregnancy. He considered the case unusual not only that an ectopic and a normal pregnancy had taken place in the same abdomen at the same time, but that also, as far as he was able to determine, the pelvic organs were normal.

SUPPURATIVE APPENDICITIS.

DR. B. M. RICKETTS reported a case of suppurative appendicitis with perforation, and in which, in removing the ruptured appendix, two fecal concretions had come into view.

CASES OF RENAL STONE.

DR. JOSEPH RANSOHOFF reported two cases of renal stone, one from a woman 50 years of age, the other from a man of about 35. The latter was a blacksmith who, in the intervals between his attacks of renal colic, was able to pursue his usual occupation without discomfort. In both, the stones were found in the pelvis of the kidney, the latter patient also presenting a hydronephrosis of several ounces, a dendritic stone of 155 grains weight, oxalate of lime, a perfect specimen of a coral calculus, showing moulds of infundibula and calyces, the latter even showing cup-like depressions corresponding to the apices of the pyramids. In the latter case not only were there attacks of renal colic, but blood-corpuscles were present in the urine at times, on microscopic examination. In both, after removal, the pelvis of the kidney was sutured with catgut Lembert sutures, and the kidney itself stitched to the lumbar fascia.

DR. HENRY BETTMAN called attention to a stone weighing over an ounce, which he had presented over a year ago, removed from the kidney post-mortem. It was also dendritic, with mouldings of the kidney substance as in this case.

POPLITEAL ANEURYSM.

DR. ALBERT FREIBERG reported a case of aneurysm of the popliteal artery in a negro, in which there had been an unfortunate termination. The man was a furniture mover by occupation, but could give no history of trauma, nor could any evidences of syphilitic infection be obtained either by questioning or on physical examination. He had readily consented to operation, and it was determined to excise the sac. On cutting down over the sac it was found that part of the wall was formed by the surrounding tissues, which made dissection a matter of extreme difficulty, so that two hours were used before the aneurysm was entirely removed. The dilatation was found to involve the lower part of the popliteal artery and the beginning of the posterior tibial, and was fusiform in character. Ligation was done above and below, with removal of the sac. The patient stood the ether exceedingly well, notwithstanding the fact that he was suffering from an aortic insufficiency of so advanced a character that relative mitral incompetency with dilatation of the right heart had supervened. Double murmurs could be heard all over the chest—this lesion was confirmed post-mortem. The patient was put to bed and heat applied, and in thirty-six hours the limb had resumed its natural warmth. The wound itself was infected at the time of operation, and profuse suppuration rapidly took place. On the sixth day dry gangrene of the toes began, and increased that day and the next. The temperature was slightly elevated. Amputation was advised but refused at this time. On the evening of the eighth day, however, a violent hemorrhage came on without warning and the patient quickly became pulseless. Several quarts of normal salt solution were injected by the interne in charge, into the subcutaneous connective tissue, and the man revived somewhat. Amputation at the middle of the thigh was decided on and immediately done, and again the anesthetic was well taken. Death occurred in three hours. Examination of the limb showed a septic condition of the arteries as the cause of the secondary hemorrhage, while the ensuing arterial obstruction was the cause of the gangrene.

DR. B. M. RICKETTS called attention to four hundred cases of aneurysm of this artery, which he had collected some years ago and reported at an annual meeting of the AMERICAN MEDICAL ASSOCIATION, and in which there had been twenty-eight instances of gangrene.

DR. JOSEPH RANSOHOFF said that in all probability there was no such thing as a perfectly aseptic wound, but that open wounds exposed but an ordinary length of time were infected to such a slight extent that the leucocytes were able to dispose of all the organisms. But in wounds exposed to the length of time of the one reported, it could hardly be expected otherwise than that infection should occur. Undoubtedly the cause of the secondary hemorrhage was the septic infection. He did not know whether the accompanying vein was wounded in this case, but even if so it would not greatly affect the result, because many cases had been reported in which ligature of both the artery and vein had been performed, with perfect recovery.

DR. N. P. DANDRIDGE reported a case of aneurysm of the popliteal artery due to trauma. He also spoke of a traumatic aneurysm of the superficial femoral, in which he had opened the abdomen and ligated the external iliac, ligating the femoral below the tumor and turning out the sac by dissection and curretting. Recovery followed.

DR. ALBERT FREIBERG said that he did not believe that the accompanying vein was injured in his case, for two reasons: 1, the circulation had promptly returned after operation; 2, the gangrene was dry in character, whereas had both artery and vein been obstructed by septic clots, moist gangrene would have undoubtedly taken place.

Topeka Academy of Medicine and Surgery.

September 11, 1899.

GONORRHEA.

DR. R. E. MCVEY read a paper on this subject, limiting his discussion to acute gonorrhea. He said: Gonorrhea is an acute infectious form of urethritis. There is more or less difficulty in cultivating the gonococcus on account of the media usually being alkaline. There is a pseudo-gonococcus which stains the same as the gonococcus of Neisser. For the first four days after acquiring the disease the gonococci are free on the surface of the mucous membrane, then at the end of that period they imbed themselves in the membrane, and then the symptoms become more marked. At first there is the slight tingling or uneasy sensation at the meatus urinarius with a slight sticky secretion, which gradually increases until it is abundant and purulent. The second stage lasts about two weeks, and four weeks is the average duration of the last stage, when the discharge stops or passes into the chronic stage.

Treatment.—If seen early the attack can frequently be aborted by the hot alkaline treatment. But not one out of twenty cases is seen largely enough for this abortive treatment to be of any value. Among other remedies are silver nitrate, permanganate of potassium and bichlorid of mercury. The active life of the germ is from six weeks to three months. Potassium bromid in water at bedtime is an excellent treatment for chordee.

DR. J. E. MINNEY reported several cases of gonorrheal ophthalmia and recommended the use of solutions of silver nitrate, 5 gr. to 1⅄, at 8 a.m., 4 p.m. and midnight. He thinks 15 and 20 grains to the ounce too strong for the eye. He uses a 1/500 bichlorid solution to touch the corneal ulcers.

DR. H. L. ALKIRE said that gonorrheal ophthalmia is one of the most unfortunate diseases a physician is called on to treat. Hygienic treatment in gonorrhea is of the utmost importance. The patient should be as nearly isolated as possible, for the public good. Always use the short-nozzle syringe, and in passing sounds always remember that the prostate portion of the urethra is the small part, and do not try to force a large 30 sound clear into the bladder.

RELATION OF PHYSICIAN AND DRUGGIST.

DR. W. S. LINDSAY presented a paper on this subject, and said that the physician should not dispense his own medicine. If the druggist does it he can see that you have made no mistakes, and also there will be a record kept for future need if necessary. This brought out quite a discussion, and several related their experiences showing this method anything but profitable, except to the druggists. It was the general opinion that the physicians should protect themselves by dispensing their own drugs.

PROFESSOR KREHL of Jena goes to Marburg as the successor of Prof. F. Mueller, in the chair of internal medicine.

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SATURDAY, OCTOBER 7, 1899.

INFARCTION OF THE HEART.

The importance of the coronary arteries for the nourishment of the heart is well known. The closure of one of the coronary arteries, by thrombosis or otherwise, is frequently the cause of sudden death. If death does not occur, necrosis of the part nourished by the occluded vessel takes place, followed by the development of a scar, and if this be extensive, aneurysm of the heart may form.

There are exceptions to this general statement with regard to the effects of occlusion of the coronary arteries. Many cases are reported which show that the main trunk of one of two coronary arteries may become plugged without causing sudden death. Such cases have been reported by Percy Kidd, Chiari and others. In these and similar cases it is presumed that the disastrous consequences usually observed failed to take place on account of anastomoses.

Anatomic investigations, especially studies of injected specimens, have demonstrated that anastomoses may exist between the main trunks of these arteries. It is generally believed, however, that no anastomoses occur between the branches of the coronaries after they have entered the myocardium, the intramuscular branches being anatomically terminal arteries. Anatomic injections, however, only prove that the arteries communicate with each other. Anatomic communication, indeed, does not necessarily mean that one vessel can perform the function of the other in case of occlusion. The idea of terminal arteries is, after all, physiologic rather than anatomic.

With these considerations in view, and in order to study the physiologic distribution of the coronary arteries, Baumgarten[1] undertook to investigate the course and the amount of territory nourished by the coronary arteries, by producing artificial cardiac infarcts in cats and dogs. In this way it was hoped that considerable light would be thrown on some of the problems in connection with the nourishment of the heart muscle. Various branches of the coronary arteries of cats and dogs were ligated, under strictly aseptic conditions. It is not necessary at this time to give any account of the technic of this difficult operation, which was quite successful, in so far as many of the animals lived for several days and even weeks.

It was found that the physiologic distribution of the coronary arteries obtained by the method of infarction corresponds in the main with the distribution outlined by anatomic methods. It further demonstrated that two arterial branches may supply portions of the same area and still be independent of each other, examples of this sort occurring quite frequently, in this series of experiments in the territory supplied by the circumflex and the right coronary artery in the posterior wall of the heart, and between both these vessels and the artery of the septum in the posterior third of the latter. When smaller branches are occluded, it was also found that the area of necrosis is not always homogeneous, but consists of small foci separated by normal areas.

Baumgarten also studied the condition of the contractility of the anemic area. As shown by Porter, parts of the mammalian ventricle will begin to contract again when fed with defibrinated blood. After ligating a coronary artery and waiting until infarction has begun, the ischemic area was cut out and fed with defibrinated blood through an arterial branch. In this way it was learned that an ischemic area retains its contractility for at least eleven hours; just how much longer contractility may persist was not determined. In order to explain the contraction of the anemic area, Baumgarten suggests that the energy is derived direct from material present in the muscle when the artery is ligated, or that this material is afterward supplied by a feeble circulation from the surrounding portion, such as might come from the vessels of Thebesius or from the coronary veins. These vessels are without valves.

Porter has shown that each muscular contraction compresses the intramuscular vessels. In infarction the anemic area contracts for a time; this compression will empty the vessels in the area, so that at the beginning of diastole the empty vessels in which there is no blood-pressure might be readily filled from the superficial coronary veins and the vessels of Thebesius. Perhaps these auxiliary sources, even if they do not succeed in preventing coagulation necrosis, might be of great value in instances in which the arterial closure is gradually established, as must often be the case in the human heart.

[1] Am. Jour. of Physiology, 1899, ii, p. 243.

The gross changes in the hearts showed that the infarcted areas are white or whitish-yellow, opaque, and flaccid. In a few cases the infarct was hemorrhagic. In all cases the part of the heart wall involved was more or less dilated. In two or more weeks the infarcts became white, began to contract, on account of the development of connective tissue, and in some of these cases polypoid thickenings of the pericardium were noted. In the oldest case, seven months, the infarcted area was found to be slightly reduced in size; it had been changed into very firm connective tissue, into which the muscle was inserted as if into a tendon.

Histologically it was found that necrosis developed fully throughout the whole area rendered anemic as early as twenty-two hours after ligation of the artery. The margins of the infarct were often irregular, interrupted by normal tissue, corresponding in this respect to the anatomic appearance generally presented by infarcts in human hearts. As is well known, myocardial infarcts are not as a rule wedge-shaped, but often irregular, and it even appears as if many infarcts may result from the occlusion of a single branch.

In experimental infarction the larger part of the capillaries and small vessels were found to be empty, except at the margins; as already noted, hemorrhages occasionally occurred throughout the infarct. In this respect again the conditions correspond with those in the human heart, in which both anemic and hemorrhagic infarcts are observed, the anemic, however, being much more common. In the experimental cases it was found that the connective tissue in the infarcted area remains unchanged much longer than the muscle tissue. As soon as the outskirts of the infarct are infiltrated with leucocytes, proliferation of connective tissue occurs, within the margin as well as just outside the infarct, followed by penetration of leucocytes and embryonal cells into the infarct and absorption of the necrotic material, ultimately leading to complete substitution with connective tissue.

In two cases sudden death from cardiac failure occurred in animals which had survived the operation for more than twenty-four hours, each time following violent exertion. In one case it concerned a cat, which died while quarreling with another cat. The other case occurred in a dog, which died suddenly after he had been fed and had been jumping about. In the animals which survived ligation of a large coronary branch from thirty-six to fifty-four hours, the pulse seemed normal and the heart sounds clear and distinct. No murmurs were detected, and no undue valvular quality was noted in the first sound.

In 1894 Porter experimentally showed that when arrest of the heart occurs after occlusion of the coronary arteries, there is falling of the arterial pressure and increase in the diastolic pressure of the ventricles. This increased pressure within the heart would undoubtedly check the flow of blood in the coronary veins, and thus interfere with the circulation throughout the entire heart.

It seems to us that these experimental studies are very interesting, because they show more in detail what must happen in occlusion of the coronary arteries in the human heart. From the experience of pathologists cardiac infarction seems to be much more frequent than is indicated by the small amount of attention given the subject in text-books of clinical medicine. Yet it is a process of much interest, not only anatomically but also clinically. While cardiac infarction may be caused by embolism, it is caused much more frequently by thrombosis, and thrombosis again is usually secondary to sclerotic changes in the coronaries or in the aorta near the coronary openings.

HEMOCHROMATOSIS AND BRONZED DIABETES.

While the physiology of pigmentation is but little understood, pathologic pigmentation is involved in even greater obscurity. In 1889 von Recklinghausen described a condition of pigmentation affecting various organs, the more important features of which are: 1. The presence in the cells of various glands, especially the liver and the pancreas, of an iron-containing pigment. 2. The presence of an iron-free pigment in the smooth muscle cells of the gastro-intestinal tract and of the blood- and lymph-vessels and in certain connective-tissue cells. 3. The association of cirrhosis of the liver with the pigmentation.

Before v. Recklinghausen's publication, other writers, especially French, had studied examples of wide-spread pigmentation, notably in connection with diabetes mellitus. There was established a new form of cirrhosis of the liver, pigmentary cirrhosis, and a new clinical condition, bronzed diabetes—"diabète bronzé." The cases of bronzed diabetes—according to Anschütz[1] there are now twenty-four recorded—present the picture of a rapidly fatal diabetes mellitus associated with cirrhosis of the liver, and in the majority of the cases, with bronzing of the skin. Post-mortem, the most striking findings are cirrhosis of the liver, interstitial pancreatitis and the presence of an ochre-colored pigment, especially in these organs, but also elsewhere.

The pathogenesis of the conditions above alluded to has been subject to much speculation. Hanot and other French writers have regarded the diabetes mellitus as the primary etiologic factor in the production of the pigmentation and other changes. Another group of writers regard the pigmentation as the result of some alteration in the blood, of unknown cause, and as the pigment is deposited in the various organs parenchymatous degeneration and consecutive interstitial changes are produced. When the chronic change in the pancreas has advanced far enough, diabetes results from the interference with the functions of the pancreas. Manifestly the problems involved in these processes are deep, difficult and complicated. Eugene L. Opie, in a recent

[1] Deutsche Arch. f. Klin. Med., 1892, lxii, p. 411.

study[2] of hemochromatosis and bronzed diabetes, based on the investigation of a case of hemochromatosis, cirrhosis of the liver and interstitial pancreatitis but without diabetes, reaches the conclusion that hemachromatosis is a distinct morbid entity; as pigment accumulates in the cells these degenerate and die and this is succeeded by interstitial changes in the organs most affected, namely, the liver and the pancreas; when the chronic interstitial pancreatitis has reached a certain grade of intensity, diabetes ensues as a terminal event in the disease. As the matter now stands, this seems to be the most satisfactory standpoint from which to start with the investigations into the fundamental process in the condition, namely, the manner in which the excess of pigment is produced. We do not know anything definite about the obscure and complicated morbid processes which lead to the formation of the pigment in hemachromatosis. If it were only possible, the study of the changes in the blood and the pigment depots in the early course of the disease might throw some light on the genesis of the pigment.

ENTERPRISING UNDERTAKERS.

The reported collusion of certain medical men in Great Britain, with undertakers, on the matter of fees, seemed like a ghastly joke gotten up to top off the other perennial antiquated witticisms against the profession. Anything like that had never been seriously charged in this country, but the suggestion from across the water appears to have borne fruit in a circular which it is said has been sent to the Chicago physicians by a "mortuary company." This circular informs the doctors that it will be to their financial interest to promptly report to a local undertaking concern the deaths of adult patients they have been treating. Every physician reporting a death one hour from the time of its occurrence, will, it promises, receive a fee, and it suggests a cipher signature for communications, to secure secrecy. The undertaking industry in Chicago has either been so much overdone, or deaths have become so scarce under the scientific care of the local profession, that competition has driven the undertakers to attempting to lead doctors out of the narrow path of ethical righteousness. So far as one can ascertain, this instance of business enterprise is not likely to be a success.

THE SUGGESTED CALIFORNIA QUARANTINE.

While individual physicians have expressed views favoring the proposed California quarantine against tuberculosis, the general expression of opinion of the medical press has been, so far, that it would be inexpedient and not in the line of true medical progress, besides being practically inefficient. It is of interest to note the opinions of the lay press so far as they have come to us. It appears from these that the average editor sees little possibility of an efficient quarantine, and some decidedly disapprove of such measures. One paper, the *Salt Lake Tribune*, while approving the proposed measure, takes the opportunity for claiming that the real sanatoria for consumptives are to be found in the mountain plateaus of the great central region of the continent, "and there is no quarantine against the sick in all that space." The legal difficulties of the proposed quarantine are, in the opinion of the majority of editors, the most insuperable objections to its declaration, and it is pointed out that California had better confine herself to the police powers she possesses within her own limits before interfering with the national prerogatives of regulating interstate commerce and travel. Even then the question of individual liberty would arise, and the first habeas corpus case would very likely, as the *San Francisco Call* intimates, give a finishing touch to the regulations, that would prevent their doing much good—or harm—for an indefinite period.

[2] Journ. of Exp. Med., 1899, iv, 279; JOURNAL, Sept. 30, ¶ 2, p. 850.

MAGNETIC HEALERS.

We publish elsewhere in this issue in full a recent decision of the Appellate Court of the Third District of Illinois that seems to be important as defining the status of a certain class of irregular practitioners. It clears the air a little, though our courts are still befogged with "Christian Science" and Dowieism. It would not seem to be an unjustifiable extension of the principle, to call the anointing, etc., indulged in by some of these, also "manual treatment" and put them in the same category with the magnetic healers. In any case, the Illinois medical law should be amended and improved by striking out the exceptions made in favor of "purely mental or spiritual" means of cure. It is worthy of note in this connection that, according to newspaper reports, the health authorities in Chicago are inclined to attribute the present alarming increase of diphtheria, etc., at least in part, to the lack of precautions and notification by "Christian Science" and Dowie practitioners. These not only do nothing to cure but are so far above human considerations that they take no pains to report or isolate, or probably even to diagnose—assuming they are able to do this—any infectious diseases. It is becoming a serious sanitary question to which the only present reply is, "what are you going to do about it?"

MORTALITY STATISTICS OF THE COMING CENSUS.

The director of the census has sent out a circular to all persons connected with the registration of mortality statistics, proposing a uniform system of returns that can be utilized for the census tables and publications. The responses to this circular, by those to whom it is addressed, have been most gratifying and their co-operation practically secured, but an additional request is made that physicians, on whom more than on any one else the real success of the project depends, will interest themselves in securing on the new forms prompt and correct returns. The questions included comprise the facts required in the law as passed by Congress, and their full and accurate answers are the chief essentials. The value of uniform statistics is obvious in itself, and in this case the necessity is imperative. The lack of anything of the kind in many parts of this country has been a serious drawback heretofore, and it is to be hoped that returns of the coming census will have, far more than those of any previous ones, a real scientific value. If it can be the beginning step toward a uniform national registration, the advantage will be, as the director says,

incalculable. The JOURNAL wishes to endorse the director's request that the medical profession interest itself generally in making the returns complete, and trusts that no failure on its part will mar the full success of the project of a uniform plan of statistics.

ENFORCED VACCINATION.

Legal technicalities often stand in the way of enforcement of salutary regulations, and the courts apparently make the most of them when a possibility of invasion of the liberty of the citizen comes within their mental vision. This is praiseworthy enough when controlled by common sense, and even in health matters the intervention of the law in favor of individual rights as opposed to alleged sanitary necessity may sometimes be wholesome and necessary. Health authorities are not infallible or always judicious, even in their own specialty, and it may be that they sometimes need a check. When, however, it is pointed out that a general legal principle stands in the way of the most essential sanitary precautions, it is unfortunate, to say the least. We have already editorially noticed a decision of the Illinois Supreme Court that enforced vaccination was illegal, unless during the prevalence of smallpox, and now we have an opinion of the Minnesota Attorney-General to the same effect. Such decisions and opinions seem to the medical mind about as reasonable as one would be that prohibited the employment of a police force except during an epidemic of murder and robbery or the use of locks or safes until after burglaries had been committed. To the legal mind, however, they seem reasonable and necessary, and the only remedy would appear to be to include the needed prophylactic measures against smallpox within the sacred cordon of the law by early statutory enactment. We have for this the comforting assurance that in some states such statutes have been held valid.

MEDICAL ORGANIZATION.

An attempt is being made in England to organize a national medical guild, to be made up of delegates of all medical associations and societies. The objects, as outlined by the promoters, are medicopolitical rather than scientific; to discuss the business rather than the professional part of the physician's life. As the *Lancet* says, in commenting on the proposed organization, "It may be thought that the profession is resorting to the methods of those who devote themselves to trade. While this may be true, it is well to remember that physicians and surgeons have to depend on their professions for their daily bread, and looking at it from this view point there is certainly need for united action." What with the medicoreligious fads, 99 per cent. of which are money-making schemes; faith curists of all descriptions; advertising frauds of every conceivable form and grade of dishonest practice; charlatanry of every stripe in every part of the country, there is certainly need of an organization on the part of the medical profession. Aside from any commercial or professional reason, our duty to our patients justifies organized effort on the part of the medical profession for the purpose of eliminating these hordes which seem to be springing up more than ever and in various disguises. National organization for this purpose, however, is not needed in this country as much as state organization. The remedy for existing evils lies in enforcement of state laws and enactment of new ones if necessary. In the few instances in which the physicians of a state have thoroughly organized, satisfactory results have always been accomplished. A united profession in any state is a political power which is always respected, and its desires are generally granted.

MEDICAL POLITICAL CLUBS.

Some of the physicians of St. Louis, who are adherents of one of the great political parties, have united in a society, or rather a political medical club, with the avowed object "to secure such legislation as will best protect the interests of medicine and command for it proper recognition in every department of the local, state and federal government." Similar associations exist in some other states, and it is said that this new organization is to be modeled after these time-tried organizations. The JOURNAL has always advocated the participation of physicians in public matters to a greater extent than is the prevailing tendency, and it may be that the organization along party lines will be one of the most effective measures for making their needed influence felt. The object of the organization, as stated, can certainly be heartily endorsed. The only question is, will an avowedly partisan organization restrict itself to these, and will there not be a temptation to utilize it for less worthy ones? A medical club organized to insure to its members or the adherents of its political party the public plums that politicians may award the profession, for example, to insure the partisan control of public charities, would be, under whatever flag it enrolls itself, a most reprehensible organization, and one that in the long run could not fail to degrade the profession and damage its best interests in every possible way. On the other hand, an organization of honorable physicians, aiming only to control the acts and influences of its party as regards its relation to the profession and in questions of medical importance can be of the greatest service, and possibly far more effective than a purely non-partisan organization. In medical politics, if we may use the term in this connection, the best interests of the profession as a whole and as the guardians of the public health should be the first and only consideration. Party connection, if used at all, should only be used for this end—a medical gang attached to a political one would be a sight to make angels weep.

TOLERANCE OF QUACKERY SHOULD END.

Under the above caption, the *Philadelphia Medical Journal* editorially discusses a most vital question, as follows:

The question as to what to do about the awful craze of quackery with which the American people seem to be seized is one of the most serious things in our public life. Millions upon millions of dollars are spent each year to enable many thousands of young men to learn the science of medicine, a science linked with all the other sciences, and the outcome of centuries of patient effort to learn the mystery and cure of disease. A success in reducing the death-rate to a marvelous degree is the unquestioned result of this long and great intellectual, civilizing labor. In this result the entire people should be profoundly interested, because nothing comes home to each so closely as his health and that of his family and friends. The very infectiousness of disease should teach every citizen the imperative duty and necessity of communal action and of strengthening all the agencies that work to the

lengthening of life and making it healthy. Every death and case of illness is a most burdensome expense upon the community. And yet, in the face of the simplest common sense and the great instinct of self-preservation, we find the most mandatory laws as to medical practice ignored, and the people almost as a body rushing pell-mell into the worship of the most shameless ignorance. Faith cure, christian science, osteopathy, and all the rest are building churches, dominating legislatures, and their adherents are everywhere swarming with wild and alarming enthusiasms reckless of the baldest dictates of acquired experience and logic. It is a veritable public calamity that must be grappled with or the progress of medicine and sanitation will be turned into a harvest of death and reaction most deplorable to contemplate. Already the needless deaths of hundreds of victims give the plainest warnings. It can no longer be a question of cynical tolerance smiling its confidence that the delusions will wear themselves out. Science, knowledge, and civilization are in many respects fundamentally endangered. The voice of every sanitarian, of every physician, of every medical society should be heard, and systematized action should be resolved to stay this rising flood of ruin. Every medical organization should go to work in downright earnest. The treatment of disease is legally the work of qualified medical men. Those acting as physicians without the legal qualification, should be prosecuted by the agents of medical societies employed to see that this medical and public criminality is stopped. If the community will not act, then in its interest we must act. For a time and in part our efforts to advance our science should give place to a resolve that all professional progress shall not be drowned in this appalling deluge of popular ignorance and delusion.

We heartily endorse every word of the above. "Every medical organization should go to work in downright earnest," should be echoed and re-echoed until every medical society in the country is aroused to realize its duty. The do-nothing policy should be ended, and an active, energetic one should take its place. Every lie should be shown up, every false claim exposed, and every pretender punished, if the law will reach them; and if not, *organized* effort should be made to get such law, or laws, as may be needed. As humanitarians, it is just as much the duty of medical men to fight the shameless quackery and the mystical humbuggery of the day, as it is to fight other unsanitary conditions.

Medical News.

Dr. John M. Cruice has been elected a member of the Board of Managers of St. Joseph's Hospital, Philadelphia, to succeed his father, recently deceased, also secretary.

Prof. T. B. Wiggin of the College of Physicians and Surgeons, Chicago, who resigned from the faculty last spring, has been reinstated and now holds the chair of clinical diagnosis.

Dr. A. F. Lemke, Chicago, has been appointed adjunct professor of medicine in the College of Physicians and Surgeons, the Medical Department of the University of Illinois, Chicago.

At the department hospital, the Presidio, San Francisco, Cal., twenty-one cases of smallpox are at present in quarantine. The infection was carried from the East, about ten days ago.

Dr. A. B. Richardson, superintendent of the Massillon (Ohio) State Hospital, has been appointed superintendent of the Government Hospital for the Insane, Washington, D. C., to fill the vacancy caused by the death of Dr. W. W. Godding.

Drs. L. Webster Fox, Alfred Stengel, J. M. Tyson, J. William White, J. C. Wilson, Ernest Laplace and John P. Arnold are among the Philadelphia physicians who have recently returned from abroad.

A new hospital built by the Sisters of St. Francis of Silver Lake, Wis., was dedicated September 28, with accommodation for about 150 patients. The cost of the building is $50,000, and of the site, $7,000.

Medical Director J. R. Tryon, formerly surgeon-general of the navy and chief of the Bureau of Medicine and Surgery, has, on account of his advanced age, been placed on the retired list. He entered the navy in 1863.

Dr. J. W. Curtis, Chicago, is to go to the Philippines as contract surgeon of the U. S. A. Dr. Curtis was assistant in the Eighth Illinois Volunteers at Santiago, and has also been a special examiner of the Pension Bureau.

Recently, at Hamilton, Ont., a woman expired under chloroform, in a dentist's chair, after ten teeth had been extracted. This is the second death within a very short space of time that has occurred in the same office, under similar conditions.

The Vienna courts recently imposed a fine of ten gulden on Dr. A. Pohl for his exclamation "Frecher Mensch!"—about equivalent to "rude creature!"—when a newcomer broke into the line of ticket buyers at the opera house. The newcomer happened to be a prominent official.

Dr. Alfred Engelbert Taylor, who for several years has been connected with the Pepper Laboratory of Clinical Medicine in Philadelphia, and who has in addition been recorder of the Philadelphia Pathological Society, has been appointed professor of pathology in the University of California.

The five persons living near Thamesford, Ont., who were bitten by a dog supposed to be suffering from rabies (see Journal September 2) have returned to their home from the Pasteur Institute, New York City, perfectly well, none of them at any time having manifested any of the symptoms of hydrophobia.

Several months ago the city council of Philadelphia set aside $37,000 for the purpose of providing filters for the public schools of that city, but as the experts have not agreed on any one as the most useful, they have not been provided, and it may not now be necessary, since filtration of the entire water-supply seems a near possibility.

It is announced that Mrs. Amelia F. Melish, an inmate of the Methodist Home for the Aged of Philadelphia, died in that institution a few days ago, having refused medical attention on account of her belief in faith cure. Death resulted from nephritis and general debility. Several more of the inmates refuse the attendance of physicians.

Only two members of the profession were on the witness-stand at Rennes: Dr. Peyrot and Dr. Weill, the latter a Jew; but a large number were interested spectators. Professor Possi considers Dreyfus utterly worn out, physically, and that he can not survive more than a year or so. The *Gaz. Méd. de Paris* mentions a rumor that he has consumption.

Louis Emanuel of Pittsburg, Pa., president of the State Pharmaceutical Examining Board, has been quoted as saying that at the present time there are many druggists in the state who have not complied with the law requiring every druggist to employ at least one assistant who has obtained a certificate issued by the Board. In Washington it is said that but four drug stores comply with all the requirements, while several comply with none.

THERE IS much sickness prevailing among the Doukhobors in the Northwest at the present time. Their medical adviser, Dr. Vera Welistchkina, is described as a tiny, slender, dark-eyed woman, who, after having taken her degree of M.D. in Switzerland, followed these people to their adopted homes. Besides being a physician, she acts as nurse and interpreter and guide to many hundred souls. At present writing she must more than have her hands full.

DR. JANE R. BAKER has been chosen general superintendent and medical director of the Chester County (Pa.) Insane Asylum, which will be completed December 1.

THE ST. LOUIS *Republic* makes the statement that Dr. Nicholas Senn's "writings bring him yearly more money than William McKinley draws as President of the United States." The *Republic* does not state how its information was obtained.

THE MEDICAL colleges of Baltimore have decided that unless the city appropriates money for the maintenance of the dispensaries connected with them, these dispensaries will be closed. Prior to 1898 the city gave about $1000 annually to these institutions, the state giving double. For the current year the city has made no appropriation, the dispensaries having been kept open by the colleges. The latter will treat state patients in their hospitals as heretofore.

A YOUNG French physician is professor of anatomy at the Medical College at Pekin, but he found it impossible to obtain sufficient cadavers for demonstration, as owing to the pious reverence for the dead, no corpses are at the disposal of the faculty except those of executed criminals. He recently complained to Li Hung Chang, as the Vienna *Freie Presse* relates. "But you get all the executed criminals," the latter rejoined. "Yes, but they are far too few for what we need." "That is easily remedied. We will have more criminals executed."

OUR EXCHANGES comment on the number of physicians who are prominent journalists in Europe, as exemplified at the Dreyfus trial. The *Gaz. Med. de Paris* mentions the following as correspondents at Rennes: Dr. Pennink, for the *Nieuwe Rotterdamsche;* Dr. Kroeger, for the *Kolnische Ltg.;* Dr. Max Nordau, for the *Vossische Ltg.;* Dr. Handl, for the Vienna *Freie Presse;* Dr. Dilla, for the *Daily Telegraph;* Dr. Israels, for the Amsterdam *Handelsblad;* Dr. Goldmann and others. Nine million words were transmitted by the telegraph in these various languages and French.

AT A RECENT meeting of the managers of the Germantown (Pa.) Almshouse, a bill was received from the Director of the Poor of Westmoreland County, Pa., amounting to $430.62 for medical aid, nurse hire, quarantine guards, and groceries for one Williams of Germantown, who was kept in the Westmoreland County Almshouse from July 21 to August 5, suffering from smallpox. It was stated that the two nurses demanded $2.50 per day, and the physician in attendance $15 per day for sixteen days, both of which were considered exorbitant by the Westmoreland County authorities. The Germantown officials have agreed to compromise on a settlement of not less than 25 per cent. of the face value of the bill, such being considered exorbitant.

THE COMMITTEE on Dispensaries of the State Board of Charities, New York, gave a public hearing September 28, for the discussion of a proposed means of regulation for the management of dispensaries in all the larger cities of the state. The amendment to the law in regard to dispensaries, placing these institutions under the direct supervision of the State Board of Charities, went into effect October 1. The object of the discussion was to bring out criticisms and comments with a view of rendering the regulations as satisfactory as possible. One rule, which caused special expression of opinion, provided that there should be a minority representation of women on the managing board of dispensaries incorporated on an independent basis. Another required that all applicants for treatment sign a sworn statement of their inability to pay, and provided for an investigation of all suspicious cases.

THE TWENTY-FIFTH annual meeting of the Mississippi Valley Medical Association was held in Chicago, October 3-6, 417 members having registered at the hour of going to press. Judge Francis Kavanaugh delivered the address of welcome in the name of the city and state, while Dr. Frank Billings welcomed the association on behalf of the local profession. The association records show 170 new members added during the year just passed. But two deaths were chronicled. The address in medicine was delivered by Dr. J. A. Witherspoon of Nashville, Tenn., that in surgery by Dr. Lewis S. McMurtry of Louisville. The secretary of the surgical section established a new precedent, one worthy of being followed—that of having each author, when he had finished reading his paper, hand it over to the secretary, in order to facilitate its publication in book form. The following officers were elected for the ensuing year: President, Harold N. Moyer, Chicago; first vice-president, A. H. Cordier, Kansas City, Mo.; second vice-president, S. P. Collins, Hot Springs, Ark. Henry E. Tuley, Louisville, Ky., and Dudley S. Reynolds, of the same city, were re-elected to the positions of secretary and treasurer, respectively. Asheville, N. C., was selected as the place of meeting of the Association in 1900. An abstract of the proceedings will be published in the JOURNAL next week.

MEDICAL COLLEGES.—A catalogue of the University of Pennsylvania has been issued in the Spanish language. The winter session of the Keokuk Medical College, Keokuk, Iowa, opened September 27.—The opening exercises of Rush Medical College, Chicago, were held the evening of October 4, Prof. J. Clarence Webster delivering the address of the evening.—The Women's Medical College, Chicago, opened October 2.—The Baltimore Medical College opened September 28, with an address by Prof. Charles G. Hill.

SANITARY CONDITION OF CUBA.—Dr. C. L. Furbush of Philadelphia, who has for some time been engaged in the work of reconstruction of sanitary matters in Cuba, under the direction of General Wood, has returned to his home but will in a few days sail for the Philippines to undertake similar work in those islands. Regarding the improvements that have taken place in Cuba, Dr. Furbush believes that great results have already occurred when it is taken into account that the conditions were formerly in a deplorable state. His special work was in the Department of Charities and Hospitals. In the hospitals, he is quoted as saying that such things as diet-kitchens and shower-baths are unknown. In a hospital with 300 patients only one bathtub was found. Ambulance service was a new innovation. Already a school for nurses has been instituted. Regarding the care of lepers, these were allowed to frequently go away on ten days' leave of absence. In his belief the Cubans are an appreciative people and in time he believes splendid results will be obtained.

Correspondence.

"Sanarelli's Autobiography."

COYLESVILLE, N. J., Sept. 26, 1899.

To the Editor:—Please send me a copy of the JOURNAL of September 9, in which you editorially criticise a fulsome, ostensibly autobiographic, notice of Professor Sanarelli, recently appearing in the *N. Y. Herald*. I am a personal friend of Professor Sanarelli, in constant correspondence with him, and I can assure you that he had nothing to do with the said notice, which was made up from fragmentary information by an Italian lawyer and a physician whose name I do not now remember. I can assure you that when Sanarelli learns of the publication, he will be much displeased at this piece of graphomaniac impudence of the legal gentleman, who, I may add, demanded in an Italian paper the greater part of the credit of producing that "autobiography."

You will see my name in the last number (September 23) of the *Medical News*, which publishes one of my articles. Trusting that you will wish to publish this rectification, I remain, Yours respectfully, FELIX VITALE.

[Dr. Vitale's article referred to, was noticed in the JOURNAL, September 30, ¶ 116, p. 854.—ED.]

Canada.

(From Our Regular Correspondent.)

TORONTO, Sept. 30, 1899.

RESOLUTION RE DOMINION REGISTRATION.

The following is an exact copy of the Resolution unanimously adopted by the Canadian Medical Association at the recent meeting:

WHEREAS, The standards of education for the profession of medicine and surgery, and the qualifications for the practice of the profession, vary in each of the provinces of Canada, and the assimilation of these standards, and, if practicable, the establishment of uniform standards throughout the Dominion are desirable; and

WHEREAS, In consequence of the provisions of the Acts of the United Kingdom of Great Britain and Ireland, known as the "Medical Acts," medical and surgical practitioners, who are by the law of a Province of Canada entitled to practice the profession in such province, can not obtain the benefits of registration under the said Acts, inasmuch as by the said provisions, the qualifications required for such registration must be regulated by the Parliament of Canada; and

WHEREAS, Medical and surgical practitioners, duly registered according to the law of one province of Canada, can not legally practice in another province without being duly registered in such province; and

WHEREAS, Serious practical inconveniences both to the public and to medical and surgical practitioners have arisen from the above cause; and

WHEREAS, It is desirable to assimilate, and, if possible, to unify the various standards of qualification established by the several provinces of Canada as conditions of admission to the study of the profession and to the practice thereof, such assimilation and unification being first attained by the establishment of some central authority with power to hold examinations of, and to establish and maintain a system of medical registration of, such persons as desire to practice the profession in more than one province of Canada; and

WHEREAS, It is not within the legislative jurisdiction of the provinces of Canada to establish such central authority, the jurisdiction of such provinces being restricted to the limits of the province and to provincial objects only; and

WHEREAS, It is expedient to constitute a corporation in which the legislatures of the various provinces may, if they see fit so to do, vest such powers as are necessary to effect the above purposes, and the other purposes mentioned in this Act; and

WHEREAS, The appointment of such an authority is for the general benefit of Canada, and would promote the advancement of medicine and surgery throughout the Dominion of Canada; therefore be it

Resolved, That this Association heartily approves of the proposed scheme which the committee has formulated and presented at this meeting; and further

Resolved, That Dr. Roddick be empowered and requested to continue his efforts to have the scheme completed and carried into effect, by such legislation as may be found necessary.

SANITARY PROGRESS IN NOVA SCOTIA.

In the opinion of Dr. A. P. Reid, secretary of the Provincial Board of Health, Nova Scotia is away behind the times in this respect, the province being very poorly equipped should an epidemic appear. Health laws they have in abundance, good as far as they go, but as there is no proper and efficient means of putting these in force, they are, for all practical purposes, almost obsolete. Thirty years ago they had a statistical office for the registration of marriages, births, deaths, etc., but it has not been much used since 1867. The secretary contends for the immediate establishment of this on modern lines. The municipal councils now appoint health officers for each county; but the perfunctory manner in which their duties are performed contributes to the disadvantages of this system. Dr. Reid calls for the appointment of medical men to these positions, and that they receive proper remuneration for the service rendered. Their duty would be to advise the provincial health secretary every quarter, of the state of health of the respective municipalities under their charge; and also immediate notification of any epidemic that might appear from time to time in their midst. For the past two years, the Provincial Board of Health has tried to keep a record of the sanitary state of the province, but the desired result has not been attained, owing to the fact that there was a lack of definite regulations on the subject. About two years ago, the Board instituted a department of bacteriology, which has proved eminently servicable to the profession and the public. This gives to any one in the province facilities for the examination of phthisic sputum, so that they may be enabled to satisfy themselves as to the presence of this disease in the lungs. The fee of $1 is charged.

HUNTING CANCER STATISTICS.

Dr. Arthur C. Duffy of London, Eng., a member of the British Cancer Society, has recently been in Toronto for the purpose of interviewing leading physicians and the secretary of the Provincial Board of Health with regard to the prevalence of cancer in this city and province. He has stated that one of the purposes of the Society, of which he is the delegate, is to secure the creation of a Royal commission to investigate the disease. He has found that cancer is not so prevalent in Ontario as in other countries, the annual death-rate from it in this province being about 0.41 per 1000 of the population, which is about two-sevenths of the death-rate from consumption. He drew the attention of the secretary, Dr. Bryce, to his report in 1889, which states that cancer was then on the increase in Ontario; but since that time the increase was not so perceptible. Dr. Duffy gives it as his opinion that the disease is more prevalent in the well-to-do classes.

SEWERAGE QUESTION IN NEW BRUNSWICK.

Fredericton, N. B., is calling on its civic authorities to immediately propound a proper and effective sewerage system and to carry it to a successful and complete termination. The city is known to be an extended succession of cesspools, the soil is permeated with them, and if not attended to at once some day soon there will be a great awakening. There is a system of private sewers in the city, and the people are calling for the immediate closure of these and the establishment of a general sewerage systm.

THE PROTESTANT HOSPITAL AT THE CAPITAL.

Mr. E. B. Eddy, Ottawa, who recently undertook to raise, by his own personal solicitations, a sufficient amount to wipe out the debt of this Hospital, has succeeded in accomplishing his task. Dr. A. F. Maybury, medical superintendent for the last two years, has retired to private practice, and it is stated that Dr. Graham of Toronto, formerly of Smith's Falls, will be his successor. The two house physicians for the current year are Drs. Whittier and Bowles, both of Ottawa.

ACTION AGAINST A HEALTH OFFICER.

Dr. Charles Sheard, M. H. O., Toronto; the mayor of the city; the city itself; and the members of the local board of health have been defendants in a suit for damages brought against them by a Miss Cummings, on account of alleged carelessness and negligence of the authorities of the Isolation Hospital in not taking proper precautions to guard against the spread of contagion in that institution. While an inmate of the Isolation Hospital, with diphtheria, the young woman claims she contracted scarlet fever through the aforesaid negligence, and for this she claimed damages; but as the plaintiff was unable to prove that she had had scarlet fever, the case was dismissed.

Books and Pamphlets Received.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A.M., M.D., assistant obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine. Containing the Pronunciation and Definition of over 26,000 of the Terms used in Medicine and Kindred Sciences, along with over 60 extensive tables. Second Edition. Revised. 16mo., flexible covers. Pp. 518. Price, $1.20, net. Philadelphia: W. B. Saunders, 1899.

ASTHMA. Recent Developments in Its Treatment. By Ernest Kingscote, M.B., C.M., L.R.C.S. Edin. Illustrated. Octavo. Cloth. Pp. 184. London: Henry J. Glaisher, 1899.

BRAIN IN RELATION TO MIND. By J. Sanderson Christison, M.D. Octavo. Cloth. Pp. 136. Price, $1.25. Chicago: Published by the Author. 1899.

A COMPEND OF THE PRACTICE OF MEDICINE. By Daniel E. Hughes, M.D., chief resident physician, Philadelphia Hospital, etc. Sixth Physicians' Edition. Thoroughly Revised and Enlarged. Including a Section on Mental Diseases and a Very Complete Section on Skin Diseases. Octavo. Flexible Morocco. Pp. 626. Price, $2.25. Philadelphia: P. Blakiston's Son & Co. 1899.

COAKLEY ON THE NOSE AND THROAT. The Diagnosis and Treatment of Diseases of the Nose, Throat, Naso-Pharynx and Trachea. For the use of Students and Practitioners. By Cornelius G. Coakley, M.D., professor of laryngology in the University and Bellevue Hospital Medical College, New York. In one handsome 12mo. volume of 536 pages with 92 engravings and 2 colored plates. Cloth, $2.75, net. Philadelphia and New York: Lea Brothers & Co. 1899.

A COMPEND OF THE DISEASES OF THE EYE AND REFRACTION. Including Treatment and Surgery. By George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Second Edition. Revised and Enlarged. One hundred and nine illustrations. 8vo. Cloth. Pp. 296. Price, 80c. Philadelphia: P. Blakiston's Son & Co. 1899.

ENLARGEMENT OF THE PROSTATE, ITS TREATMENT AND RADICAL CURE. By C. Mansell Moullin, M.D. Oxon., F.R.C.S. Second Edition. Octavo. Cloth. Pp. 212. Price, $1.75. London: H. K. Lewis; Philadelphia: P. Blakiston's Son & Co. 1899.

KIRKE'S HAND-BOOK OF PHYSIOLOGY. Fifteenth American Edition. Revised by Warren Coleman, M.D., professor of physiology in the Woman's Medical College in New York, etc., and Charles L. Dana, A.M., M.D., professor of nervous and mental diseases in the New York Post-Graduate Medical School, etc. One volume, 856 pages, 8vo., profusely illustrated by 516 wood-engravings in black and colors, and by chromo-lithographic plate. Muslin, $3.00, net; leather, $3.75, net. New York: Wm. Wood & Co. 1899.

ON THE WASTING DISEASES OF INFANTS AND CHILDREN. By Eustace Smith, M.D., Fellow of the Royal College of Physicians, etc. Eixth Edition. Octavo. Cloth. Pp. 377. Price, $2.00. Philadelphia: P. Blakiston's Son & Co. 1899.

OVER 1000 PRESCRIPTIONS or Favorite Formulæ of Various Teachers, Authors and Practicing Physicians. The whole being carefully indexed, and including most of the newer remedies. Cloth, 300 pages, postpaid $1.00. Detroit, Mich.: The Illustrated Medical Journal Co.

PROGRESSIVE MEDICINE—VOLUME III. A quarterly digest of advances, Discoveries and improvements in the Medical and Surgical Sciences. Edited by Hobart Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo handsomely bound in cloth, 440 pages, 11 illustrations. Philadelphia and New York: Lea Brothers & Co.

THE RISE AND DEVELOPMENT OF THE LIQUEFACTION OF GASES. By Willet L. Hardin, Ph.D. Octavo. Cloth op. 150. Price $1.50. New York: The Macmillan Company. 1899.

SCHLEIF'S MATERIA MEDICA AND THERAPEUTICS. A manual of Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing and Medical Latin. For the use of Students and Practitioners of Medicine. By William Schleif, Ph.G., M.D., instructor in pharmacy in the University of Pennsylvania. In one very handsome 12mo. volume of 352 pages. Cloth, $1.50, net. Philadelphia and New York: Lea Brothers & Co.

SURGICAL NURSING. A Compilation of the Lectures Upon Abdominal Surgery, Gynecology and General Surgical Conditions and Procedures, delivered to the classes in the Training School for Nurses connected with the Woman's Hospital of Philadelphia. By Anna M. Fullerton, clinical professor of gynecology in the Woman's Medical College of Pennsylvania, etc. Third Edition. Revised and Enlarged, with 69 illustrations. Octavo. Cloth. Pp. 294. Price, $1.00. Philadelphia; P. Blakiston's Son & Co. 1899.

A TREATISE ON SURGERY, BY AMERICAN AUTHORS. Edited by Roswell Park, M.D., professor of surgery in the University of Buffalo, N. Y. New condensed edition in one royal octavo volume of 1262 pages with 625 engravings, and 37 full-page plates in colors and monochrome. Cloth, $6.00, net; leather, $7.00, net. Philadelphia and New York: Lea Brothers & Co. 1899.

MINOR SURGERY AND BANDAGING. By Henry R. Wharton, M.D., demonstrator of surgery in the University of Pennsylvania. New (4th) edition. In one 12mo. volume of 594 pages, with 502 engravings, many being photographic. Cloth, $3.00, net. Philadelphia and New York: Lea Brothers & Co. 1899.

PAMPHLETS RECEIVED.

Accidental Heart Murmurs. Geo. W. Webster, Chicago. Reprinted from the JOURNAL.

Advice to Gonorrheal Patients. Ferd. C. Valentine, New York. Reprinted from Phila. Med. Jour.

Anesthesia: Nitrous Oxide; Ether; Chloroform. S. Ormon Golden, New York. Reprinted from N. Y. Medical Journal.

Anesthetizer as a Specialist. D. H. Galloway, Chicago. Reprinted from Phila. Med. Jour.

Angioneurotic Edema. H. F. Slifer, North Wales, Pa. Reprinted from Phila. Med. Jour.

Appendicitis. Chas. J. Whalen, Chicago. Reprinted from Phila. Med. Jour.

Cerebrospinal Meningitis. J. W. Porter, Midway, Kans. Reprinted from Trans. Kan. Med. Soc.

Ectopic Pregnancy. With Report of Fourteen Cases. A. McLaren, St. Paul, Minn. Reprinted from St. Paul Med. Jour.

Empyema of Gall-Bladder. J. E. Summers, Jr., Omaha. Reprinted from Western Med. Rev.

Etiology of Movable Kidney. C. S. Bacon, Chicago. Reprinted from Am. Gyn. and Obst. Jour.

Endoxine in Pediatric Practice. Gustavus M. Blech, Chicago. Reprinted from N. Y. Med. Jour.

Gastro-Enterostomy: Indications and Report of Cases. Byron B. Davis, Omaha. Reprinted from Western Med. Rev.

Gunshot Wounds: History of Cases. J. B. Mahon, Wilkesbarre, Pa. Reprinted from Trans. Luzerne Co. Med. Soc.

Hernia. A. McLaren, St. Paul, Minn. Reprinted from Northwestern Lancet.

How I Cure Tuberculosis. Edwin Klebs, Chicago. Reprinted from Jour. of Sci. Med.

Hypnotism. S. L. Jepson, Wheeling, W. Va. Reprinted from Trans. W. Va. State Med. Soc.

Importance of Blood Examinations in Reference to General Anesthetization and Operative Procedures. Hamilton Fish, Ouray, Col. Reprinted from Annals of Surg.

Importance of Early Diagnosis in Locomotor Ataxia, as Affected by the Newer Pathology. Wm. Broaddus Pritchard. Reprinted from N. Y. Med. Jour.

Involvement of the Eye and Ear in Cerebrospinal Meningitis. Wm. Cheatem, Louisville. Reprinted from Phila. Med. Jour.

Lateral Route for Removal of Cervical Growths. Edmund W. Holmes, Phila. Reprinted from Internat. Clinics.

Modern Possibilities in Chronic Catarrhal Deafness. Sargent F. Snow, Syracuse, N. Y. Reprinted from Laryngoscope.

Nephro-Ureterectomy for Traumatic Hemato-Hydro-Nephro-Ureterosis. John E. Summers, Jr., Omaha. Reprinted from Med. Rec.

New Arts in Practice. Wm. B. Doherty, Louisville. Reprinted from Cincinnati Lancet-Clinic.

Notes on Injuries of Head and Tubercular Pelvic Peritonitis. Chas. C. Allison, Omaha. Reprinted from Trans. Western Surg. Soc.

One Hundred and Thirty-two Gall-Stones Removed without Operation. Edward Speidel, Louisville. Reprinted from Am. Pract. and News.

Proper Dosage of Thialion. E. M. Smith, Newtown, Conn. Reprinted from Jour. of Med. and Sci.

Rubber Gloves or Gauntlets; Their Use by Physicians and Surgeons. J. E. Summers, Jr., Omaha. Reprinted from the JOURNAL.

Report of Case of Tumor of Brain. Wm. Broaddus Pritchard and John A. Wyeth, New York. Reprinted from N. Carolina Med. Jour.

Saw Palmetto. P. L. Sherman and C. H. Briggs. Reprinted from Pharm. Arch.

Some Observations, Mainly Clinical, on Uric Acid Diathesis. Isaac J. Jones, Austin, Texas. Reprinted from Southern Practitioner.

Some Remarks of Chronic Bright's Disease. Arthur R. Elliott. Reprinted from Med. Record.

State Care of Insane. Frank C. Hoyt, Mt. Pleasant, Iowa. Reprinted from National Hosp. Record.

Modern Use of Synthetics. R. W. Wilcox, New York. Reprinted from Med. Fortnightly.

Treatment of Pertussis. W. H. Donaldson, Fairfield, Conn. Reprinted from Proc. Conn. Med. Soc.

Tumors of the Brain. U. O. B. Wingate, Milwaukee. Reprinted from Annals of Ophth.

Value of Expression in Cases of Moderate Contraction of the Pelvic Inlet. C. S. Bacon, Chicago. Reprinted from Internat. Clinics.

What the Physicians and People of Colorado Need More than a Medical Bill. By P. D. Rothwell, Denver. Reprinted from Colo. Med. Jour.

Trade Pamphlets.

Citrophen. Roessler & Hasslacher Chem. Co., New York.
Respirozone. Tilden Co., New Lebanon, N. Y. and St. Louis.
Resinol. Resinol Chem. Co., Baltimore, Md.
Sanguiferrin. Sanguiferrin Phar. Co., St. Louis.
Tannalbin. Merck & Co., New York.
Thyroid Gland. Armour & Co., Chicago.

Deaths and Obituaris.

GEORGE W. WAYSON, M.D., died in Baltimore, Md., September 26, aged 79 years. He was graduated from Washington University Medical School, Baltimore, in 1846, and began practice in that city in 1851. In 1861 he raised the Third Maryland regiment for service in the Civil War, and became Colonel, later serving at the battles of Gettysburg, Yorktown and Shiloh, as surgeon. He was a city councillor at one time, and introduced the bill for the establishment of the first public school for negro children.

JOHN W. NASH, M.D., emeritus physician of the Eastern State Hospital, Williamsburg, Va., died there September 21. Dr. Nash succeeded Dr. Garlick as assistant physician at this hospital in 1893, continuing in that position until last April. He was 73 years old.

ISRAEL GILBERT YOUNG, M.D., died of heart disease, in Philadelphia, September 26. He was graduated from the University of Pennsylvania in 1862, and practiced in Camden County until 1866, when he removed to Philadelphia.

FRANCIS A. THOMAS, M.D., College of Physicians and Surgeons, N. Y., 1853, died in New York City, where he had practiced for over forty years. His death occurred September 28, two days after having been struck by a trolley car. He was well-known in political, medical and social circles, having served as a councilman in the Seventh district in 1866, and as a surgeon to the municipal police from 1871 to 1877. His literary talent and oratoric ability were much above mediocrity, while his wit constituted an element in his popularity. An exceedingly accurate memory also supplemented his culture and judgment as a clinician.

HENRY C. CUNNEELY, M.D., Bellevue, N. Y., 1886, at one time a practitioner in New York City, died in Hackensack, N. J., September 30.

H. B. Barnes, M.D., Ionia, Mich., died suddenly September 29, aged 65 years....T. G. Hickman, M.D., Vandalia, Ill., September 22, at the age of 71....R. E. Oliver, M.D., Half-Way, Ky., September 27....W. H. Padon, M.D., Blackwell, Okla.

DEATHS ABROAD.

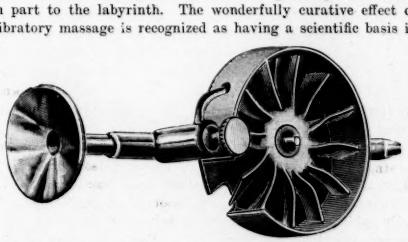
Jules Simon, Paris, "The leading authority on children's diseases of our epoch," although retired from active practice for some time, died recently....Professor Borysiekiewicz of Graz, is dead..... Dr. Gerhard Westfeldt, physician to King Oscar, died suddenly September 26, at Drottninghoim, at the age of 71 years.

New Instrument.

THE INTRATYMPANIC MASSEUR.

BY W. H. WEAVER, M.D.
CHICAGO.

The various instruments hitherto brought out for the application of massage to the treatment of chronic catarrhal deafness are all intended for use through the external meatus. In an endeavor to apply massage to the Eustachian tube and tympanum, I found my thumb action on the cut-off much too slow, producing at most not over four interruptions per second. In order to produce more rapid action I have had constructed an instrument which may be called an "intratympanic masseur." This instrument produces a rapid vibratory massage of the tissues of the middle ear, which is probably transmitted in part to the labyrinth. The wonderfully curative effect of vibratory massage is recognized as having a scientific basis in



physiology and pathology. It is composed essentially of a tube, fitting between the cut-off and the catheter, in which is placed a valve that cuts off the current once in each revolution. This valve is kept in motion by the impact of a small jet of air against a fan wheel attached to the stem of the valve. The whole being incased makes a neat and compact instrument which should never get out of order with ordinary usage.

As constructed, it is capable of making from four to twenty revolutions of air puffs per second, which, when the Eustachian catheter is properly placed, should strike the drum membrane with about the sound of a planer in a planing mill, or slower according to the adjustment. The massaging effect can easily be recognized by both the patient and the operator. It can be tolerated by the patient from two to ten times longer than ordinary Politzerization, producing a rather agreeable sensation, relieving soreness rather than producing it. Tinnitus aurium is rapidly relieved in all the cases in which it has been used, and the hearing power rapidly improved in comparison with the ordinary methods of treatment.

The instrument is intended for use with about 20 to 35 pounds of air pressure, depending somewhat on the ease with which the air passes through the Eustachian tube, and that largely on the expert handling of the Eustachian catheter.

92 State Street.

Miscellany.

Pelvic Diseases and Insanity: Correction.—On page 831 of the JOURNAL for September 30, at the top of the left hand column, the word "intensity" was used for the word "insanity," in the paper by Dr. H. A. Tomlinson.

Tuberculosis and Prisons.—Büdingen urges that all criminals with curable tuberculosis, condemned to brief sentences, should be incarcerated in a sanatorium instead of a prison, thus avoiding adding to the already excessive tuberculosis rate in prisons. The sound body may restore the perverted normal sense to normal, he adds, among other arguments.

Future of Appendicular Subjects.—According to *Revue Mensuelle*, the history of 86 persons who had appendicitis six months to five years ago, shows that 5 of the 19 medically treated relapsed and required an operation later. Out of 47 operated on at the time of the attack, 28 had had no recurrence and are in excellent health. Thirty operated on after the subsidence of the attack are all in excellent health.

Obstetric Injuries of the Eye.—Cramer states, in the *Cbl. f. Gyn.*, July 8, that it is almost impossible to fracture the bones of the skull by direct pressure of the forceps, but that when the edge of the spoon is applied on a line formed by the squamous suture, the lateral fontanelle and the suture between the frontal and zygomatic bones, the arch of the orbit is easily fractured and the eye liable to be violently compressed. This compression of the orbit may also occur in natural delivery.

Action of Quinin on Malarial Parasites.—Le Monaco (*Sperimentale*, 1) has been studying the action of a 1/1500 solution of quinin on the parasites in the blood of a patient with quarternian fever, finding that they contracted and altered their shape; the pigment granules were seen in lively motion and the parasites abandoned the cells, although remaining near them. The effect of quinin is therefore to drive the parasite out of the corpuscle, and hence the best time to administer it is during the fever-free intervals, when mostly young parasites circulate in the blood.

Indications for Extirpation of a Septic Puerperal Uterus.—With a pulse of 100 a minute, ten c.c. of blood should be drawn to search for pathogenic microbes. In Prochownik's experience (*Monats. f. Geb. u. Gyn.*, June and July; JOURNAL, August 26, p. 541) the streptococcus alone was encountered, and he found that every case in which it was found terminated fatally, while every case without it recovered, no matter how severe the symptoms had been. Extirpation is therefore urgent when the streptococcus is found in the blood, or even for a streptococcus focus in the uterus. It is justified with pyohemia and septic metritis. He cites five cases of septic affections of the uterus treated by removing the infected organ. Three recovered.

Elevated Pelvis Position.—Desfosses calls attention (in the *Revue de Gyn.*, for August) to the fact that the sloping position ascribed to Trendelenburg is to be found illustrated and recommended for herniotomies, in a work by Jean Scultet, a physician and surgeon at Ulm, 1595-1645. He adds that the practice of bestowing the name of an author on a process is liable to entail injustice to his predecessors, as science does not proceed by jumps, but its onward course is progressive and continuous; every progress proceeds from some other progress. The human mind can not create. In its knowledge are the seeds of all its productions. Jayle urges the adoption of an extreme sloping position for gynecologic examination, and also for seismotherapeutics or vibratory massage.

Blood Parasites of Rats.—Recent research in Berlin, according to *Ztft. f. Hyg.*, xxx, 2, has confirmed the statements that the trypanosoma is pathogenic for rats alone, and established the facts in respect to its growth, etc., and manner of infection, which is not through the alimentary canal but by contact, living with or being bitten by infected rats or artificial infection through the peritoneum. The parasites disappear from the blood of white rats in four to six weeks, and the rats are thereafter actively immune to infection, and their serum has a passively immunizing effect on other rats. In some cases the transmission of the infection was traced to fleas. It is interesting to note that this research on rats and fleas was the work of a woman, Lydia Rabinowitsch, and W. Kempner.

Ether Drinking.—To the evils of alcohol are now added the evils of ether drinking, which has spread alarmingly in eastern Prussia, where ether is sold in the saloons, like any liquor, four or five grams to the glass. In the town of Memel alone, it is stated, the amount thus sold last year was 8580 liters, and in reality twice this amount was consumed, the rest brought in by smugglers. The effect is said to be four times more powerful than any equal amount of alcohol, but its continued use produces intolerable suffering and incurable lesions of liver, kidneys and heart.—*Jour. de Med. de Paris*, September 3.

Damages for Loss of Use of Both Legs.—In the case of Fonda vs. The St. Paul City Railway Company, the supreme court of Minnesota affirms a judgment for $20,000 damages for personal injuries alleged to have been caused by the defendant's negligence, and resulting in the loss of a portion of both the plaintiff's legs. In doing this, the court takes into consideration the trial judge's statement that he did not think the damages were so excessive as to show that the jury was influenced by passion and prejudice, and that "it must not be forgotten that the plaintiff's injuries were very serious; that he lost the use of both legs, and is a cripple for life; that he never will be able to work or enjoy life as others do; that he was nearly a year in the hospital, and suffered much pain; that his mental suffering, by reason of his condition, must have been, and must always be, great."

Should Have Been Referred to Jury.—Methvin vs. Crumbley, is the title on appeal of an action brought by the latter named party, a physician, against a husband, for medical services to his wife. The defense was that the wife had voluntarily abandoned her husband without sufficient provocation, and that the services were rendered after notice by the husband to the physician not to render them. The evidence pro and con on the question of notice thus raised presenting, in view of the other evidence in the case, as the supreme court of Georgia says, a material issue of fact, which ought to have been passed on by the jury, under appropriate instructions from the bench, it holds that the trial court erred in not thus submitting this issue to them, and in summarily disposing of the case by directing a verdict for the physician, and, on this account, it reverses a judgment so entered in the physician's favor.

Important Ruling to Hospitals.—In the case of Alice Hanmore, who brought suit against the German Hospital, Philadelphia, for alleged mutilation—autopsy—of the body of her mother, who died in that institution, autopsy being held without the consent of the daughter, Judge Audenreid of the Court of Common Pleas recently delivered his opinion as follows: "The statement of claim filed by Mrs. Hanmore is another action brought against the employes of the hospital for damages in respect of the identical acts for which she has here endeavored to hold the hospital to account. The verdict directed by the trial judge might well be sustained on the grounds upon which we rested our judgment in that case. But for the present purposes it is unnecessary to do more than to point out that the German Hospital is a public charity, possessed of no funds save what has been contributed to it by the charitably disposed for the furtherance of its philanthropic purposes, and to divert its assets to compensate for the injuries inflicted or occasioned by the wrongful acts of its agents or servants

would, in the language of the Supreme Court, "be against all law and equity."

Still a Work of Original Scientific Research.—In the recent Hemstead case, where it had to determine the classification for duty of a work entitled "A Text-Book on Diseases of the Ear and Adjacent Organs," the United States circuit court holds that the fact that a book of this kind should necessarily quote largely from the writings of others, and deal with the results of investigations made by others, not only does not deprive the book of its character as one of original scientific research, but may tend to characterize the author as one well qualified for the original work he has in hand. Nor does it think that because a book is imported in unbound sheets, it is not a book, and on that account not entitled to free entry when scientific books devoted to original research are so admitted. The collected sheets containing in orderly and connected fashion the record of the intellectual and literary work of the author, the court holds, is a book, unless for some particular and special purpose a narrower definition is prescribed by law.

Spontaneous Fractures During Epileptic Seizures.—R. Charon relates (*Ann. Med.-Psych.*, July and August) five observations of such fractures, two occurring in his presence. The fracture was located in the middle portion of the bone, slanting from above downward and from without inward, with pronounced edema or ecchymosis over the large flexor and abductor muscles, with no wound nor contusion indicating a fall or violence. If besides these indications the subject was tied, or the articles of furniture immovable, the spontaneity of such a fracture can be affirmed. He adds that epileptics should not be tied and that the furniture should be light and easily displaced in order to prevent such accidents. In one case the subject was tied in a chair, with the trunk immovable, the knees pressing against the arm of the chair in the convulsion, the right limb flexed at a right angle with the thigh, flexion and adduction impossible. The result was a sudden crack as the natural curve of the femur was exaggerated to the fracture point. The bones were normal in all but one case.

Adherences After Laparotomies.—Steffens has been making a study of forty-five individuals on whom laparotomy had been performed (*Beitrage z. Klin. Chir.*, xxiii, 2) several times, at Kümmell's clinic, thus allowing inspection of the conditions consecutive to previous operations. He found that in every case in which the operation had been followed by a rise in temperature attributable to the condition of the abdomen, adherences had formed, while not a trace of adherences was to be found in the cases without post-operative hyperthermia. The conclusion that the development of adherences is chiefly due to some slight peritoneal infection, not sufficient to cause a general peritonitis, yet determining a slight rise of the temperature, is evident. He also found lesions of the serosa and the lack of peristaltic movement of the intestines, factors in the production of adherences. On this account Kümmell tries to obtain an evacuation of gases within twelve hours of the intervention, by means of an injection, or the insertion of a canula when the intestines have been sutured.

Venereal Infection.—An important fact derived from the leading addresses at the Brussels prophylactic congress, is that the propagation of venereal diseases is chiefly due to young prostitutes, minors. In Fournier's 11,000 cases of syphilis in his private practice the large majority of men were infected between the 20th and 26th year; average 23; the women between 18 and 21; average 20. In Commenge's statistics, cited by Verchere, comprehending 11,465 women in lower walks of life, with syphilis or gonorrhea, in the majority infection had occurred between 17 and 19. Le Pileur also stated that out of 718 syphilitic prostitutes between 12 and 50 years of age, 452 had contracted syphilis between 16 and 20. The broadening of the sphere of tertiarism which has been the tendency of the last few years was also a noticeable feature of the Congress. Fournier stated that among 4400 adults with direct or indirect syphilitic accidents, the brain, spinal cord or nerves were affected in 1857. He considers the prognosis of syphilis affecting the nervous system as most unfavorable; observing that in every hundred cases of cerebral syphilis, only twenty-two recover; nineteen die and fifty-nine survive, but with infirmities practically equivalent to death.—*Sem. Med.*, September 13.

Encouraging Results of Koch's Investigations of Malaria in Italy.—Professor Koch, who sailed for the Dutch East Indies in August to continue his research on malarial infection, announces as the results of his studies in the Tuscan Maremma that he is convinced that man is the only host of the malarial parasite during the months from summer to summer. The alternating host, the mosquito, is found all the year around, but only during the summer months does the parasite find in its body the warmth necessary for its development. When summer arrives the mosquito derives the parasite from one person and transfers it to others, thus transmitting infection. The connecting link in the infection is therefore the recurrences during the fall and winter, in the persons infected the summer before. If these recurrences could be jugulated—and this is possible with quinin—the infection could be eradicated before the arrival of summer; the mosquitoes would then find no parasites and malarial infection would gradually die out. When he first arrived in Tuscany, in April, all the cases he could find were old, dating from 1898. Suddenly, on the arrival of warm weather, large numbers of fresh cases were noted—a regular epidemic. He concludes that it is possible with the aid of quinin to break down the bridge that connects season with season, and in this way exterminate malaria.

Construction of Illinois Law and Dowie Treatment.—Until the supreme court of the state finally passes on the questions involved, more or less interest will attach to the reasoning of Justice of the Peace Everett, Chicago, in the case of the People of the State, for use of the State Board of Health, vs. Henricka Bratsch, which is reported in full in the *Chicago Legal News* of September 23. The defendant, who was charged with practicing medicine without a license, was called to care for the wife of the prosecuting witness during her confinement in childbirth. The patient and the defendent were both members of the Christian Catholic Church, presided over by "Dr." Dowie. The defendant contended that she was not guilty of practicing medicine, within the prohibition of the statute, because of the provision therein that: "This act shall not apply to any person who ministers to or treats the sick or suffering by mental or spiritual means, without the use of any drug or material remedy." The imposition of a fine shows how the Justice looked at it. He holds that the phrase, "without the use of drugs or material remedy," is pure surplusage, and that negativing the use of drugs and material remedies does not enlarge the affirmative protection accorded to mental and spiritual means, so that the latter terms shall include all means, except drugs and material remedies. Moreover, he says that the entire portion of the medical practice act providing that the act shall not apply to any person who ministers to or treats the sick by mental or spiritual means, is merely a declaration of what has always been the law, and would have been the law whether it was in the act or not. There is no question of the right of a man suffering from a disease to call in any system of treatment that seems best to him. And the adherents of this faith have a perfect right to treat disease or suffering by any means allowed by their faith—so long as those means do not encroach on the ordinary practice of medicine or surgery. But while praying a dislocated shoulder into place is, for example, permitted, the justice holds that to pull it into place requires a license. So, had the defendant sat by the patient's bedside and merely prayed, placing her entire confidence in the power

of God, he holds that her treatment would have been permitted, and the result would have been immaterial. But when, as the evidence showed, she prayed part of the time, and part of the time lent her strength to "assisting Nature," as the counsel styled it, giving directions to the elder and nurse who were also doing all in their power to assist Nature, and finally used a pair of scissors to perform a surgical operation, viz., cutting the umbilical cord, the justice declares that he is satisfied she was placing as much reliance in her skill as a midwife as in her faith in God, and for the the former, he holds, she required a license.

Mark Twain and "Christian Science."—Mark Twain has tried "Christian Science" and tells us all about his experience, in the October *Cosmopolitan*. He was in Bavaria, or in some other foreign out-of-the-way place, and in an unlucky moment fell from a high precipice, broke forty or fifty bones, and dislocated most of the joints of his body. No physician was to be had within miles, but a horse doctor, and a "lady doctor" from Boston, who was a follower of Mother Eddy. He did not like to try the horse doctor, so he tried the "Christian Scientist," and he tells us how he tried to understand the occult reasoning of Mrs. Fuller—that's her name—from Boston. When he complained of the pain he was told: "Matter has no existence; nothing exists but mind; the mind can not feel pain, it can only imagine it." "But it hurts, just the same," exclaimed Mark, as the dislocated joints and the broken bones got in their work. "It doesn't," remarked Sister Fuller, and she immediately proceeded to show the inconsistency of pain, the reasoning and wherefores of the explanations befuddling the patient considerably. Just as he was most bewildered, the Stubenmädchen accidently stepped on the cat's tail, and the cat let fly a volley of cat profanity. Mark, with hesitancy, asked: "Is a cat's opinion about pain valuable?" "A cat has no opinion; opinions proceed from mind only; the lower animals being eternally perishable, have not been granted mind; without mind opinion is impossible." "Then she had a *real* pain." "I have already told you that there is no such *thing* as real pain." "It is strange and interesting. I do wonder what was the matter with the cat," Mark soliloquised. After more interesting philosophic conversation, in which the cat was the central thought, Mark was instructed in the grand principles of "Christian Science." "The fundamental propositions of 'Christian Science' are summarized in the four following self-evident propositions: 1. God is all in all. 2. God is good, Good is mind. 3. God, spirit, being all, nothing is matter. 4. Life, God, omnipotent good, deny death, evil, sin, disease. There—now you see." But he could not see, and had the "fundamental propositions" worked backward without effect. Nevertheless the "Christian Scientist" fixed him up all right. The bones slipped into place, the broken ends got together, and everything was lovely as far as the fractures and dislocations were concerned. But he had a cold and a stomach-ache, and as Mrs. Fuller could not manage these, he was finally compelled to call the horse doctor, who relieved him after giving a few buckets of bran mash. Mark treats the subject in his usual manner. Part of the time he employs sarcasm, then a little of that innocent philosophy is brought into play, and the latter has full sway when he tells about the book, the "Bible Annex," as he dubs it, which, though inspired eighteen hundred years ago, was not copyrighted till 1875, since when it has been copyrighted three times, and this he does not understand. He thinks they would get along better if they did not go so far in claiming business. "The 'Christian Scientist' was not able to cure my stomach-ache and cold; but the horse-doctor did it. This convinces me that 'Christian Science' claims too much. In my opinion it ought to let diseases alone and confine itself to surgery. There it would have everything its own way. The horse-doctor charged me thirty kreutzers, and I paid him; in fact, I doubled it and gave him a shilling. Mrs. Fuller brought in an itemized bill for a crate of broken bones, mended in two hundred and thirty-four places—one dollar per fracture. 'Nothing exists but Mind?' 'Nothing,' she answered, 'all else is imaginary.' I gave her an imaginary check and now she is suing me for substantial dollars. It looks inconsistent."

Magnetic Healing.—The following decision was rendered by the Appellate Court, State of Illinois, Third District, May term, 1899, by Presiding Justice Wright, from McLean County: "This was an action of debt in the name of the People for the use of the State Board of Health, against appellant to recover a penalty for practicing medicine without having a certificate from the State Board of Health in compliance with the act to regulate the practice of medicine. The trial was by jury and resulted in a verdict and judgment against appellant for $100 from which he appeals, and for reversal insists the trial court erred in the admission of improper and the rejection of proper evidence, the verdict is against the law and the evidence of the case, the court gave improper instructions to the jury and refused proper instructions requested by appellant. It appeared from the evidence that appellant kept and maintained an office in the city of Bloomington where he received, examined and treated persons for diseases. He advertised that he had effected marvelous cures of various kinds of diseases, without the use of medicine or surgery by magnetic treatment, and that patients reap rich rewards of his large experience and new methods, and that his charges were $1 for each treatment or $5 per week, of seven treatments. It was proved on the trial that appellant had treated one man for disease of the stomach, another for asthma, and a third for sunstroke and consequent ailments, having a contract with the later for $15 to be paid in hack hire, and $15 in money, all of which have been paid but $2. The method of treatment was by rubbing the parts of the body supposed to be affected. It is first insisted that these facts do not prove that appellant practiced medicine within the meaning of the statute. Section 10 of the act in question declares that any person shall be regarded as practicing medicine, within the meaning of the act, who shall treat, operate on, or prescribe for any physical ailment of another. If to advertise that he had effected marvelous cures, and that patients reap rich rewards of his large experience and new methods, and by means of such advertisement secure the attendance of persons whom he actually treated and operated on does not fall literally within the definition of the statute of what shall be regarded as practicing medicine, then it would be difficult to imagine the legislative intent by such enactment. If to treat or operate upon a person for a physical ailment by rubbing the affected part is not a treatment or operation for a physical ailment, what is it? It seems to us the mere statement of the question demonstrates the absurdity of every opposite position. In Eastman v. People, 71 Ill. App. 236, a case similar to the one we are considering, it was held that where the treatment consisted wholly of rubbing and manipulating the affected parts, with hands and fingers, and by flexing and moving the limbs of the patient in various ways, the statute was violated, although no medicines or instruments were used. That to treat or operate on does not necessarily imply the use of medicine or instruments, many of the minor operations being effected without the use of instruments by mere pressure, extension and flexion, and that medicine is the art of understanding diseases and curing and relieving them when possible, it being that branch of physic which related to healing of diseases, and the act in question is not restricted to any particular methods of remedies, which are almost innumerable, considering what are used and what have been discarded. It is next insisted that appellant was acting under the direction of Dr. Ross, a licensed physician, and that the court erred in its rejection of evidence tending to prove such fact. The evidence upon this point that was offered and to which objection was sustained by the court consisted of the general statement of

Dr. Ross that appellant was acting under his direction and that certain symptom blanks were used by appellant in his communications with Dr. Ross. There was no specific evidence offered that such blanks were used, or that Dr. Ross ever gave any directions, in the cases of Wineberg, Reeve and Augustus, the only persons shown by the evidence to have been treated or operated on by appellant, and inasmuch as the rejected evidence was not responsive to the case made by the plaintiff, the objection was properly sustained. It is true that upon the trial the counsel for appellant stated to the court that he expected to show that appellant made use of these blanks and acted as the assistant of Dr. Ross in each of the cases in evidence, but when the blanks themselves are produced, as shown in the abstract of the record, it is apparent they have no reference to any of the cases in evidence. Dr. Ross also testified that the symptom blanks of the three persons were furnished by him, but the absence of the blanks, if they were used and sent to Dr. Ross, is wholly unaccounted for. Much complaint is made of the instructions of the Court to the jury, both of those given by the Court and such as were refused. In its instruction the Court told the jury in substance, that although the treatment may have been requested and directed by a regular attending physician of the person being treated, yet the person in fact administering the treatment would be guilty of practicing medicine. As an abstract principle such instruction is wrong and vicious and should not be given in any case, but in the case presented there was no evidence admitted to the jury, and no competent evidence offered, that in any of the three instances wherein it was proved that appellant had practiced medicine, he was acting under the direction of a regular attending physician, of the persons who were in fact treated or operated on by appellant, and hence the instruction, although wrong in principle, could not and did not harm appellant. The instructions requested by appellant upon this point were properly refused. Some of the instructions are not otherwise free from criticism, still we think appellant not harmed by them, and the instructions given at his request as fairly stated the law as the evidence justified and his rights demanded, and in view of the whole evidence, no other verdict than the one returned, that of guilty, would have been proper or responsive to the evidence, and in such cases errors of instructions will seldom reverse. Finding no reversible error the judgment of the Circuit Court will be affirmed."

Mode of Infection and Symptoms of Bubonic Plague.—The report of Khan Bahadur N. H. Choksy, of Bombay, India, based on the examination of 939 cases of the plague in a Bombay hospital, deals with infection under the following headings: 1. Through the skin. 2. From the contents of buboes. 3. Through the sputum. 4. Through inspiration; atmospheric conditions, excreta, through the stomach, rat bites and shoe bites.

1. The fact that buboes were mostly found in the femoral and femoral-inguinal region made it seem probable that infection gained entrance through the skin, but in not more than 5 per cent. of the cases could there be found evidences of a breach of surface, while it must be admitted that these persons had been in the habit of going barefooted all their lives, and had innumerable cracks and fissures on the soles and elsewhere. Yet traces of inflammatory mischief from the absorption of the virus through the crack or fissure were conspicuous by their absence.

2. The pus from incised buboes was always found, on the first day, to contain a large number of plague bacilli, which, however, gradually diminished within three to five days, after which the discharge from the wound was almost sterile. In this connection a case is reported in which a member of the hospital staff, having operated on some cases, became infected directly through the hands, leading to the formation of buboes in axillary region with diffused infiltration over the forearm, arm and chest.

3. In the patients with plague, who subsequently developed pneumonia—pneumonic type—the sputum was found to contain almost pure cultures of the plague bacilli. "And knowing as we do the habits of the lower classes, who would spit anywhere and everywhere, round about where they were sitting or lying down, it is not difficult to conceive how prolific a source of infection such sputum must be, and that it must have played, and is probably playing a by-no-means insignificant part in diffusing the epidemic."

4. While the study of the sputum might lead one to conceive that infection might occur by means of the dried sputum, ordinary respiration does not seem to infect, or scarcely a doctor, nurse or hospital attendant would enjoy such immunity as they do.

From the fact that the plague epidemic progresses like a regular wave from one end of the country to the other, as does influenza, atmospheric agency must be a potent factor. While infection by means of the feces or urine may be possible, it was not found what proportion of these excreta contained the germ. Infection through the stomach seemed doubtful, since in no case were the abdominal symptoms marked, or the mesenteric glands so enlarged as to indicate primary infection through the digestive tract. No infection through the water-supply was possible, nor could it occur through grain—millet grain—used as food, which necessarily entailed the process of boiling, sufficient in itself to destroy the micro-organism. In no case was the plague attributed to rat bites, or to fleas, flies, ants, bugs or even to mosquitoes.

The symptomatology is considered under the head, "General Condition of Patients on Admission," being divided into: 1, attitudes; 2, gait; 3, aspect; 4, speech; 5, temperature; 6, buboes; 7, nervous and circulatory system, etc.

Regarding the attitude, the statement is made that owing to the advanced stage at which most cases were admitted, there was probably no characteristic attitude, unless it was that the patient as a rule would generally lie flat on the back, with limbs extended and one leg almost invariably crossed over the other. As a rule the gait was tottering, with weakness of the limbs, and bending of the knees, indicating thorough prostration. The aspect was almost invariably characteristic. Ordinarily the plague seemed to be stamped on the patient's features, giving it a characteristic and not to be easily-forgotten appearance. The features depicted fear and anxiety, or sadness and resignation, as if from an intuition of an impending fate. In certain cases of the nervous type there was delirium, with a maniac appearance, blood-shot eyes protruding through their sockets, giving rise to a weird aspect. The speech was as a rule characteristic, and, in fact, speech combined with the aspect, more often than not, determined the diagnosis of the plague. The speech was of two kinds. In the one it resembled that of a man under the influence of drink, the words being broken up into syllables, and each syllable articulated with difficulty and hesitation, and in a more or less thick and husky tone. In the second variety the patient's reply would be pronounced snappishly, with an angry look, the forehead being thrown into wrinkles, indicating that he was annoyed at being disturbed. In other cases aphasia existed.

Before the rise of temperature there is for several pre- **days a feeling of malaise,** followed later by the appearance of a bubo, at which time the temperature begins to rise. It may or may not be preceded by a rigor. Children always show a higher rise than in the case of adults, the general range being from 102 to 105 F., with morning remissions and evening exacerbations with a difference of from 1 to 2 degrees. The temperature generally falls by lysis—sixth to tenth day—crisis being exceptional. When there is a rapid fall in the temperature it almost invariably indicates impending death.

The appearance of buboes is usually coincident with the initial rise of fever, and is characterized by pain, tenderness and swelling. In most cases the pain is severe, but exceptionally the buboes could be handled without giving discomfort. Swelling was always marked, due to inflammation of the gland, and to effusion or infiltration, serous, serosanguineous or hemorrhagic around the buboes. The size of the bubo was

found to be quite independent of the gravity of the case. (Regarding the location of the buboes, see JOURNAL, xxxiii, No. 3, p. 178.)

At an early stage the nervous system is profoundly affected; headache, vertigo, intense pain at the back of the head, over the frontal region, along the spine or in the course of the sciatic nerve, muscular twitching, tremors and subsultus are present. Delirium may appear on the third or fourth day, and may be acute, or of the low muttering variety, as in typhoid fever. In some cases hypersensitiveness was observed so that the slightest touch would excite screams.

In no other acute disease does the pulse—an index of circulation—present so many variations, in force, frequency, volume and tone, as in bubonic plague, and in no other disease is the disproportion in the normal ratio between the pulse, temperature and respiration so divergent. The pulse varies with the character of the disease. The full bounding pulse, so often associated with high temperatures, is conspicuous by its absence, and in the majority of cases the pulse is easily compressible, extremely feeble and very frequent. As the case advances, the pulse becomes intermittent, regular or irregular, more often the latter, and distinctly dicrotic. The dicrotism was extremely well marked in some cases, and in advanced ones was considered characteristic. Failure of the heart's action was either sudden or gradual, with consequent collapse. No case of sudden death during convalescence was observed.

The blood was found not to be markedly deprived of its hemoglobin, there being present from 65 to 80 per cent., and a leucocyte count of 12,000 to 28,000. Bacteriologic examination of the blood was undertaken by the Austrian Commission, with the conclusion, like that of the other commissioners, that cover-glass preparations of stained blood were not only unreliable, but extremely fallacious, and that the only reliable test was by means of cultures.

Increased frequency of the respiration is a marked feature of the disease, probably due in part to hypostatic congestion of the lungs and edema of the larynx. The lips, teeth and gums are generally covered with sordes, and the mouth is dry, the tongue being covered with a thick white coat in the center, while the edges are red. The urine is generally scanty, high colored, and serum albumin is always present. Microscopically, hyaline casts are seen. Hematuria rarely occurs. The eyes are always injected and suffused, and in many cases sub-conjunctival hemorrhage is very distinctly marked, the whole of the eye appearing as a large bloody mass overlapping the sclero-corneal junction, but leaving the cornea free. Panophthalmitis with sloughing of the cornea may be present.

The points to be specially noted in making the diagnosis are the following: 1. Presence of fever, high or low. 2. A quick, easily compressible pulse. 3. Furred tongue. 4. The aspect of the patient, as shown by the *facies pestica*. 5. The peculiar hesitating speech. 6. The presence of a bubo. 7. Suffused eyes. 8. The presence of cough with rusty or hemorrhagic sputum.

Queries and Minor Notes.

PEDIATRIC STATISTICS.

FLORENCE, ALA., Sept. 25, 1899.

To the Editor:—I want some articles on diseases of children, as to feeding, hygiene, etc. Please refer me to where I can find them. I also want the statistics as to the death-rate of children, caused from artificial feeding. J. D. D.

ANSWER:—We know of no way of meeting our correspondent's request better than by referring him to the leading text-books on the subject, such as "Keating's Cyclopedia," the more recent work of Starr, and others. The literature on infantile diseases, bearing more or less on the question of diet, is very extensive, and a number of articles have been recently published or abstracted briefly in the JOURNAL. Articles on the subject are continually appearing in the medical journals.

The Public Service.

Movements of Navy Medical Officers.—Changes in the medical corps of the U. S. Navy for the week ending Sept. 30, 1899:

P. A. Surgeon C. E. Riggs, detached from the *New York* and ordered home to wait orders.

P. A. Surgeon E. S. Bogert, ordered to the *New York*.

P. A. Surgeon C. P. Kindleberger, detached from the Philadelphia Naval Hospital and ordered to the *Iowa*.

P. A Surgeon M. S. Guest, detached from the *Wabash* and ordered to Philadelphia Naval Hospital.

P. A. Surgeon R. P. Crandall, detached from the *Iowa* and upon relief to proceed home and wait orders.

Asst.-Surgeon B. L. Wright, ordered to additional duty on board the *Monterey*.

Surgeon T. A. Berryhill, detached from the *Panther* when out of commission and ordered to the *Monongahela*.

Marine-Hospital Changes.—Official List of Changes of Station and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the seven days ended Sept. 28, 1899.

Surgeon F. W. Mead, granted leave of absence for two days.

P. A. Surgeon Rupert Blue, granted leave of absence for one month and 8 days from October 6.

Asst.-Surgeon S. R. Tabb, to proceed immediately to South Atlantic Quarantine for temporary duty.

Asst.-Surgeon R. H. von Ezdorf, to proceed to Miami, Fla., for special temporary duty.

Asst.-Surgeon W. C. Billings, relieved from duty at New York City, and directed to report in person at the Bureau for temporary duty in charge of the miscellaneous division.

Acting Asst.-Surgeon G. W. Bailey, granted five days leave of absence.

Acting Asst.-Surgeon W. S. Walkley, granted leave of absence for four days.

Hospital Steward N. C. Comfort, to proceed immediately to New York City and report to P. A. Surgeon H. D. Geddings for assignment to duty in charge of the steamer *Wapiti* on her voyage from New York to Florida.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General of the U. S. Marine-Hospital Service, during the week ended Sept. 30, 1899:

SMALLPOX—UNITED STATES.

Massachusetts: Everett, September 15 to 23, 1 case.
Tennessee: Memphis, September 15 to 23, 1 case.
Virginia: Portsmouth, September 15 to 23, 1 case.

SMALLPOX—FOREIGN.

Belgium: Antwerp, September 2 to 9, 1 case.
Bohemia: Prague, August 26 to September 9, 6 cases.
Brazil: Rio de Janeiro, July 27 to August 11, 121 cases, 63 deaths.
Egypt: Cairo, August 19 to 26, 1 case.
India: Bombay, August 5 to 29, 12 cases.
Greece: Athens, September 2 to 29, 12 cases.
Mexico: Chihuahua, September 8 to 16, 6 deaths.
Russia: Moscow, September 2 to 10 3 deaths; Odessa, August 26 to September 9, 2 cases, 1 death; Warsaw, August 26 to September 9, 8 deaths.

YELLOW FEVER—UNITED STATES.

Florida: Key West, September 25 to 29, 166 cases, 9 deaths; Miami, September 5 to 22, 2 cases, 1 death.
Louisiana: New Orleans, September 15 to 29, 19 cases, 4 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, July 28 to August 11, 4 deaths.
Colombia: Cartagena, August 26 to September 9, 1 case, 1 death; Panama, September 12 to 19, 3 cases, 1 death.
Mexico: Tampico, September 15 to 22, 1 death; Tuxpan, September 4 to 11, 3 deaths; Vera Cruz, September 14 to 21, 6 deaths.

CHOLERA.

India: Bombay, August 15 to 29, 4 deaths; Calcutta, August 5 to 19, 15 deaths; Karachi, August 12 to 19, 3 cases, 2 deaths.
Japan: Osaka and Hiogo, August 19 to 26, 1 death; Yokohama, August 19 to 26, 1 death.

PLAGUE.

China: Amoy, August 5 to 12, 40 cases, 40 deaths; Hongkong, August 5 to 19, 44 cases, 46 deaths.
Egypt: Alexandria, August 28 to September 3, 1 case, 1 death.
India: Bombay, August 15 to 29, 159 deaths; Calcutta, August 5 to 1 . 87 deaths; Karachi, August 12 to 19, 2 cases, 2 deaths.

CHANGE OF ADDRESS.

Bebb, W. S., from Chicago to Hinsdale, Ill.
Conwell, F. G., from 103 State to 381 Superior St., Chicago.
Elmore, R. D., from Hiawatha to Olsburg, Kan.
Fridus, S. L., from Maywood to Ashland Boul. and Taylor St., Chicago.
Greenley, T. W., from Loon Lake, N. Y. to Hot Springs, S. D.
Hendley, F. W., from 2528 Chatham to 727 E. McMillan St., Cincinnati, Ohio.
Isley, W. P., from Newport News to Hampton, Va.
Ingalls, H. A., from Chillicothe to Berkshire Building, Cincinnati, O.
Jones, M. D., from 76 43d Court to 67 S. 44th Ave, Chicago.
James, W., from 2115 Van Buren to 726 Taylor St., Chicago.
Johnston, C. W., from Heard to Worth, Ga.
Jackson, D., from Pleasantville to Audubon, Iowa.
Keenan, I. W., from Piedmont to Quaker City, Ohio.
Mather, E., from Detroit to Birmingham, Mich.
Riemans, L. A. M., from Holland, Mich. to 640 W. Congress St., Chicago.
Schofield, P. B., from Chicago, Ill. to Newark, Mo.
Woodward, J. H., from Brandon, Vt. to 58 W. 40th St., New York City.